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GENERAL NEWS SECTION.....

*Illustrated.

The New York State Public Service Commission for the Second district, after a study extending over six months, has announced its report on the New York Central's proposed 2½ cent rate for local passenger fares; and it is a disapproval. The verdict is the old-fashioned one of "not proven." The full report is not yet at hand, but the two points on which alone the Commission seems to have solid ground for rejecting the road's proposals are (a) that the plan for a uniform rate throughout the Central's lines does not afford a correct or a rational remedy for the inequalities now existing on some of the branches, and (b) that too small a share of the expenses of conducting the passenger business is charged to interstate traffic. The strength of these arguments cannot be estimated until the details are known. It is probable that the points which really weigh in the commissioners' minds are the eleven per cent earned from all classes of traffic on the capital stock last year, and the density of the passenger traffic on the Hudson division of the main line, which is declared to be profitable. A short-sighted public opinion will approve the decision in both of these features; though in both it may be wrong. The fact that 1915 was characterized by unusually favorable conditions, not likely to be maintained regularly, seems to have been ignored. The Hudson division does a heavy passenger business, but it has heavy expenses; and the fact remains that the profits are, without doubt, too small compared with freight, and are small compared with passenger profits in former years. One obstacle, however, which is likely to block passenger rate increases everywhere is found in the extreme reluctance with which many commissioners, editors, mayors and other interested persons accept the Interstate Commerce Commission's dictum that the freight traffic ought not to bear any of the expenses of the passenger business.

Two of the most important railway organizations in America are the Master Car Builders' Association and the American Railway Master Mechanics' Association. The reports of their committees, and the discussions of and the action taken on them, have expressed the wisdom of the mechanical departments of the railways of North America for a half century. The exhibit of railway equipment and supplies made annually

by the members of the Railway Supply Manufacturers' Association in connection with the conventions of these associations is the largest, most instructive and most important exhibition of machinery of a special class made anywhere in the world. Such conventions, and such an exhibit in connection with them, ought to attract widespread attention from the executive officers of the railways. Heretofore this can hardly be said to have been the case. Many executive officers have shown more disposition to give ear to exaggerated and misleading reports regarding the entertainment features at the conventions than to get the facts regarding the very important work done there both by railway officers and by the supply companies. This year, however, there was an unusual number of executive officers present; and they expressed great satisfaction with what they saw and heard. Both the conventions and the exhibits would be made much more valuable to the railways if more of the executive officers would regularly attend some of the sessions of the former and carefully inspect the latter. A very large part of all the important improvements in railway equipment and machinery are originated by the manufacturers; the rapidity of the increases in the efficiency of railway operation are determined in no small measure by the promptness with which improved equipment and devices are adopted by the railway managements; and a railroad officer can learn more about the improvements which the manufacturers have introduced in a short time at the exhibit of the Railway Supply Manufacturers' Association than he can in a very long time anywhere else.

The zealous solicitude of the United States government for the waterways of this country is a frequent source of expense to the railways in providing for movable bridges over streams that are navigable in name only, or on which the waterway traffic is potential rather than real. There are many bridges which are not opened more than once a month and then only for some small pleasure craft, yet these bridges must be designed to meet the special conditions of a movable structure and be provided with the powerful machinery necessary to move the ponderous loads. Under such conditions the design of the bridges presents problems materially different from those to be met in a bridge which is turned many times each day. Because

Bridges Over Waterways

a bridge is a fixed structure for a large portion of the time it should be made as nearly equivalent to a fixed span when it is closed as possible. While the amount of power to be consumed in opening the bridge is inconsiderable because it is done so rarely, the potential power must be available at all times. The new double track swing span of the Chicago & Western Indiana over the Little Calumet river in Chicago presents an interesting solution of these problems. The shipping on the river is negligible and the small amount of power consumed for the total number of bridge turnings in a year, together with a most unfavorable load factor, offered such an unfavorable prospect that electric power could not be obtained at a favorable rate from the local utility company. The advantages of electrical operation were retained, however, by installing a gas-engine generator set and a storage battery. The motors for operating the bridge take current from the battery, which is recharged by the generator whenever sufficient power has been consumed to make it necessary. By providing a center bearing with side wedges on the pivot pier and a sufficient lift on the end bearings to make each half of the structure a simple span when the bridge is closed, it becomes practically a fixed structure at such times. The structural details by which this has been accomplished and the arrangement of an operating station and a power plant within a single building, together with the remote control arrangement which this involves, demonstrate the ingenuity of those responsible for the design and execution of this project.

A notice has been sent to employees of the Pennsylvania Railroad and other Pennsylvania lines east of Pittsburgh, the total number of such employees being about 146,000 calling attention to the strike ballot which is to be taken by the train service brotherhoods and calling for volunteers to serve, in case of a strike, to keep the road running. It points out that were the trainmen to go on strike and succeed in compelling the total cessation of train movement, this would result in stopping work in all departments of the railroad. The employees in train service number only about 25,000, or approximately one-sixth of all the road's forces; and the notice calls attention to the fact that if the trainmen were to be successful in tying up the railroad they would inflict suffering and distress on other employees and their families, as well as on the public. The company calls on its loyal employees to send in their names to their superior officers, together with a statement of the positions for which they would volunteer. Railroad companies have not always treated the employees who are not organized in strong unions particularly well. Some classes of men, such as station agents and clerks, have unquestionably been underpaid, and there is little doubt that railroad employers have lost an opportunity to make loyal employees where a more liberal and far-sighted policy would have secured loyalty. On the other hand, there has been a tendency in recent years to be more just to the unorganized station agents, clerks and others, and it is safe to say that the great majority of railroad officers actually in charge of the operation of the properties would favor increases in the pay of these classes of employees. The difficulty has been, and still is, to convince the boards of directors that a more liberal policy in this respect is "good business." The Pennsylvania, not so much because of higher wages, but because of an enlightened and humane policy of treatment of unorganized employees, has, to an unusual extent, secured the loyalty of these men. Whether or not this loyalty would be strong enough to stand the acid test of helping the company against the brotherhoods is a question, but the appeal which the company now makes is interesting and apparently shows a feel-

ing of confidence on the part of the management that, if justified, is a tremendously high compliment to the Pennsylvania management.

A LABOR BACK-DOWN, ARBITRATION OR A STRIKE

THE leaders of the train service brotherhoods long have been regarded as very skillful tacticians. They have so maneuvered their forces year after year as to secure more and more unreasonable conditions of work and higher wages for their followers. Consequently, there is today an indefensible disparity between the situation of the train service employees and that of the other 82 per cent of railway employees. In the recent conferences at New York, however, the National Conference Committee of Managers, representing the railways, completely out-maneuvered the representatives of the train service employees. The result is to put the labor brotherhoods in a position that is untenable.

When the brotherhoods originally presented their demands to the railways they announced that their purpose was the establishment of an eight-hour day. The spokesmen of the roads at once pointed out that the effect of their plan would be not to establish an eight-hour day but to cause an advance in wages estimated at \$100,000,000 a year. In the conferences at New York the spokesmen of the employees were obliged to admit that its adoption would cause an increase in wages, but contended that it would amount only to about \$25,000,000 a year. This is a complete abandonment of their original argument that the application of their plan could be made without expense to the railways, and will give the public some idea of the amount of reliance which may be put on their other contention. Their demands are for an increase in wages, and statistics which have been compiled based on the actual payrolls for recent months show that the original estimate of \$100,000,000 is approximately correct.

The railways throughout have contended that the facts available will convince any rational and fair minded person that the demands of the train service employees should not be granted; that they are not entitled to higher wages; and that under present conditions the roads could not afford to accept their proposals. The Conference Committee of Managers showed the good faith of the managements in taking this position by offering to submit both the proposals of the employees and the proposals of the railways to arbitration either by the Interstate Commerce Commission or under the Newlands act.

No fairer proposition could have been made. The employees showed their unwillingness to submit the controversy to determination by any impartial body by refusing the proposition of the railways and announcing that they would take a strike vote. The purpose in taking a strike vote will be to put in the hands of the labor leaders a club with which they hope to be able to intimidate the railway managements and the public, and by the aid of intimidation to get something that they could not get otherwise. Their course indicates a want of confidence in the justice of their cause which can hardly fail to have its effect on public opinion.

The club they are going out to get will be, if they get it, the largest and most formidable with which any leaders of organized labor ever were armed. If they get a strike vote by the locomotive engineers, firemen, conductors and other trainmen they will have the power to stop the operation of every railway in the United States. That is a power which never up to this time has been possessed by any body, governmental or private. It is a power which is too great to be allowed to be possessed by any body except the government of the United States. It is a power over the prosperity, the food supply and even the lives of the people of this country. The greatness of the power for which the labor leaders are

seeking is the very strongest argument which could be advanced why they should not have it. The members of the brotherhoods ought not to be willing to give it, and the national government ought to deprive them of the ability to give it.

It is silly to say that the power will not be abused and that there will be no strike. Why is it being sought, then? People said that there would be no great war in Europe, but it came. They said it would last only six months, but it lasted two years. Labor leaders, like other men, are likely to get intoxicated with a notion of their own importance when they have great power, and to exercise it for the pleasure of exercising it, regardless of the consequences, or without foreseeing them.

In the circumstances it is the height of folly for the American government and public to let the controversy between the railways and the men in train service drift any farther. The only way to make sure that no nation-wide strike will come is to render it impossible. It can be made impossible only by some form of government action which will prevent it from being ordered. The managers of the railways have offered all they ever should offer. For them to propose any terms except arbitration by some impartial body would be an act of cowardice and of disloyalty to their companies and to the public, of which we hope and believe that they are incapable. There must be either (1) a backdown on the part of the train service employees, or (2) arbitration by some impartial tribunal, or (3) a strike. There is no other way out.

THE "RAILROAD LOBBY" AND THE POSTAL LOBBY

POSTMASTER GENERAL BURLESON and his assistants have been crying aloud because of the efforts that the "railroad lobby" has been making to prevent the passage of a bill which would place the railways absolutely at the mercy of the postoffice department in respect to the compensation paid them for transporting the mails. In view of the means which Mr. Burleson and his aids are using in trying to secure the passage of the bills in question, their course in complaining about the activities of the "railroad lobby" is a fine exhibition of "cheek." The postoffice department has issued orders to postmasters to lobby in favor of the bill the department is supporting. This fact is disclosed by the following letter sent out by Ernest T. Schmitt, postmaster at Louisville, Ky., to all the postmasters in Kentucky, which has come into the possession of the *Railway Age Gazette*:

United States Post Office,
LOUISVILLE, Ky., May 19, 1916.

Postmaster:

I am ordered by the Post Office Department at Washington to notify all postmasters in Kentucky that the Railroad Lobby in Washington is about to succeed in its efforts to defeat the bill now before Congress proposed by the Post Office Department. Should the efforts of the lobby succeed, it would result in a curtailment of the Rural Free Delivery Service to such an extent that it would affect not less than 20,000 rural patrons in Kentucky alone. You are therefore urged to at once communicate with your Congressman and Senator to use their efforts to defeat the Railroad Lobby, and have as many as possible of your patrons do the same.

ERNEST T. SCHMITT, Postmaster.

It will be noted that the department does not merely request the postmasters to support its bill if they believe in it, but that it orders Mr. Schmitt to send out the desired notice to all the other postmasters in Kentucky; and it causes the notice to be phrased in such a way as to beg the entire question as to the merits of the proposed legislation. No better example of the effort of a bureaucracy to use the machinery of government to crush its opponents has been afforded in this country. And for what real object have Mr. Burleson and his aids resorted to such tactics? The purpose of the bill which they are supporting is to reduce the compensation of the railways for carrying the mails, and to place in the hands of the postoffice department the fixing of mail pay

rates in future. The railways, believing the present rates are unremunerative, are fighting to prevent them from being reduced, and to have the determination of the reasonableness of mail rates delegated to the same body that fixes freight, express and passenger rates—the Interstate Commerce Commission. The postoffice department occupies, or ought to occupy, the same business relation to the railways that passengers and shippers do; but it is ordering the postmasters to stir up agitation in favor of legislation which would enable it absolutely to dictate its own terms to the roads. The course it is taking is the best argument that could be advanced for the defeat of its bill, for it is the best evidence that for the railways to get justice from the department is hopeless.

A FUTILE BUT ENLIGHTENING CONFERENCE

WHILE the conference between the National Conference Committee of the railways and the brotherhoods of train employees demanding an increase in wages was without tangible result, so far as any approach to a settlement is concerned, it has undoubtedly had one very important effect. It was a necessary formality which had to be gone through with in order that the issues should be definitely defined, and the position of the railways has been greatly strengthened not only by the evidence of their own fairness, but by the public exhibition of the unreasonableness of the brotherhoods.

In his remarks at the final session of the conference, published elsewhere in this issue, Mr. Garretson, the spokesman for the four organizations, expressed regret that the railways had not seen fit to offer a definite proposition as the basis for a compromise, which he intimated the brotherhoods might have been willing to accept.

In view of the statement included in the letter with which the demands were originally presented, that no other proposition would even be discussed, and especially in view of the repeated assertions made at the conference both by Mr. Garretson and other brotherhood officers that the employees' proposition is "not a modifiable one," it is difficult to see how the roads could have been expected to go any farther than they did when they offered to submit the entire controversy either to the Interstate Commerce Commission or to a board of arbitration under the Newlands law.

The reasons given by Mr. Garretson for the refusal to consider either of these proposals are perfectly understandable when looked at from the point of view of organizations that have been fairly successful heretofore in practically regulating their own wages and working conditions. If previous arbitrations and threats to strike have not always given the employees all that they asked they have at least always resulted in increases in wages without any possibility of reductions.

Arbitration under the conditions proposed by the railways would undoubtedly place in jeopardy some of the arbitrary allowances and "trimmings" of various kinds which the organizations have forced into the present schedules and which under their saving clause they insist in retaining even if they should succeed in securing the enormous increase in wages provided for by their demands. Mr. Garretson's refusal to consider arbitration "at this stage of the game" or until an interruption of traffic is threatened, indicates plainly the hope that the club that would be placed in the hands of himself and his associates by a strike vote will enable them to force an arbitration which shall not take into consideration any demands of the railways. In other words, they want the one-sided, heads-I-win, tails-you-lose kind of arbitration that has prevailed in the past and with which the men are disappointed because it has sometimes been less successful than the more warlike methods that preceded it.

An unfortunate feature about the railroads' proposition which the brotherhoods declined to consider is that it is so technical that the public does not readily grasp its signifi-

cance. The public can readily understand, however, that the railways have voluntarily agreed to submit the entire controversy to arbitration under the existing law, the same law that has enabled these same brotherhoods to secure enormous increases in wages in recent years, or to the same tribunal that regulates their rates, by no means always to the satisfaction of the roads, and that the brotherhood leaders have declined to consider either plan until they can come back with a vote of their membership to tie up the transportation of the country unless the conditions of the arbitration agreement are framed to their liking.

The public should also understand that the negotiations were broken off because the brotherhoods are not satisfied with demanding the increase in their wages, averaging over 25 per cent, that would be effected by the change in the present basis of a day's pay from 10 to 8 hours and in the overtime rate from a pro rata to a time and one-half basis, but that they insist on retaining also all arbitrariness and special allowances and all rules providing for double compensation for the same time or service even to the extent of claiming time and one-half wherever the word "overtime" now appears in a schedule as applied to such allowances.

The railways take the position that while many of these arbitrariness in the present schedules may be entirely reasonable with the present basis of pay, they would become entirely improper, unless some adjustment was made, under the higher basis of pay and overtime now demanded. They might have gone farther and stated that some of these rules are unreasonable under any basis of wages.

It was not even necessary for the roads to point out examples of the effect of these rules. As soon as they announced the principles which they intended to insist upon, in the event of any change in the present basis, the brotherhood officers put into the record a list of approximately 100 questions, all citing specific applications of present schedule provisions under which the men are paid under one rule for time or service which is also paid for under another rule. And when the roads explained how they proposed to modify the rules, in the contingency of a settlement on the basis of the demands, the brotherhood officers were so anxious to go back and tell the men that the roads wished to take something away from them that they did not even pause to argue the merits of their own proposals.

One of the typical questions propounded by the brotherhood leaders for the purpose of illustrating the effect of the railroad proposal that there should be no double compensation, cited the case of a crew that spent 3 hours in switching before leaving the terminal and then ran 100 miles in 7 hours, making a total of 10 hours' work, for which it would be paid under the present schedules on some roads for 100 miles plus three hours, or the equivalent of pay for 13 hours. The railroads' answer stated that under their proposal the crew would be paid for the 100 miles and for 2 hours' overtime, because it worked for two hours actual overtime. At time and one-half the overtime would be paid for as for three hours at a rate 25 per cent higher than the present rate. On some roads the present schedules provide that the switching allowance shall be paid as overtime, the overtime rate now being the pro rata rate. Under the terms of the brotherhood demands the 3 hours would then have to be paid for as $4\frac{1}{2}$ hours, at the higher rate per hour.

If the crew ran the 100 miles or only 60 miles in 5 hours it would still claim the 3 hours switching allowance, and under the terms of the demands would thus get pay for 1.45 days for only 8 hours' work.

It may be entirely reasonable to pay a trainman for a full day for less than either 100 miles or 10 hours, if there is no other work for him to do that day, because he has practically given up all opportunity of obtaining employment for the rest of the day. But that does not mean that it is reasonable to insist on a full day's pay for less than a day's work and then

additional pay for any additional incidental service at overtime rates. In some cases, under the terms of the demands, overtime rates would have to be paid for the half hour preparatory time before the men start on their runs, or for any delay in starting after the scheduled time for departure. That is "punitive" overtime with a vengeance. Many men are now regularly paid a day's pay for 60 or 70 miles run in 6 or 7 hours, and then demand and receive a second day's pay if asked to make the same run again the same day or if they are assigned to another class of service. Under the "saving clause" they demand the right to do the same thing and to collect a rate $87\frac{1}{2}$ per cent higher than the present rate, whenever a delay causes them to run into overtime.

In one of the examples cited by the brotherhoods a crew runs 50 miles in freight service in 4 hours and 50 miles in passenger service in 4 hours on short turn-around runs, and then works 4 hours in work train service and receives 3 days' pay for 12 hours' work. Under the railroad proposals it would receive proportionate rates for the three classes of service.

It was significant that throughout the conference very little was said about the eight-hour day. Mr. Garretson admitted that "men in transit cannot be relieved as men in a fixed service can" and that the demands do not provide for a real eight-hour day—"the eight-hour day in its purity," he called it—except in yard service. Even in yard service they provide for a day of eight hours or less. Most of the questions asked by the brotherhood officers had to do with the amount of compensation, not with the question of long hours. They were far more interested in the number of hours to be paid for than in the number of hours worked. Their strike vote therefore resolves itself into a question of whether the transportation service of the country shall be stopped for the purpose of enforcing a demand for an increase of from 25 to $87\frac{1}{2}$ per cent in the rate of pay per hour for more hours of pay than of work.

NEW BOOKS

Proceedings of the American Wood-Preservers' Association. 432 pages, 6 in. by 9 in. Illustrated. Bound in cloth. Published by the American Wood-Preservers' Association, F. J. Angier, secretary treasurer, Mt. Royal station, Baltimore, Md. Price, cloth, \$3.50; paper, \$2.50.

The twelfth annual convention of the American Wood-Preservers' Association was held in Chicago on January 18-20, 1916. This volume contains the complete proceedings of the convention. In addition to the statistical section relative to the quantity of wood preservatives consumed, the amount of wood treated in the United States in 1915, and other data, detailed tables are given relative to the use of wood block floors and durability records of cross ties.

Train Operation. By William Nichols. 340 pages, illustrated, 4 in. by $6\frac{1}{2}$ in. Published by Le Grand Brown, 77 South Ave., Rochester, N. Y. Price, flexible cloth, \$2; flexible leather, \$2.50.

William Nichols, the author of "Train Operation," has been chairman of the Board of Examiners of the Southern Pacific Company for the past ten years and is the author of a book issued several years ago, dealing with Rule 4 of the Standard Code. He was assisted in the preparation of the present work by Professor Stuart Daggett, head of the Department of Railway Economics of the University of California, Monroe C. Kidder, superintendent of the Permanent Disability Rating Department of the California State Industrial Accident Commission and W. E. Boland, signal engineer, Southern Pacific Company. The book represents the author's interpretation and amplification of the American Railway Association's rulings up to and including November, 1915. It covers the standard train rules, train orders, block and interlocking signal rules, and questions and answers for examinations. It is illustrated with a number of colored plates and provided with a complete table of contents in order to facilitate ready reference.

Ask Submission of Wage Controversy to I.C.C.

Negotiations on Demands of Train Employees Broken Off and Trainmen's Organizations Take Strike Vote

SETTLEMENT of the controversy over the wage demands of the brotherhoods of train service employees, either by arbitration under the Newlands act or preferably by submission to the Interstate Commerce Commission, was proposed by the National Conference Committee of the Railways and rejected by the brotherhood officers at the conclusion of the conference in New York City on June 15. The brotherhoods then announced their intention of taking a strike vote of the employees.

A. B. Garretson, president of the Order of Railway Conductors, who acted as spokesman for the brotherhoods, qualified the rejection of arbitration by saying that it could not be considered "at this time," and indicated that a compromise proposition from the railways might have been accepted by the organizations.

As reported in last week's issue the break in the negotiations was precipitated on June 14 by the brotherhood leaders, who announced that they would not accept any modification of their demands for an eight-hour basic day and time and one-half for overtime in accordance with the proposition of the railways and that they saw no object in continuing the conferences until they had been given additional authority by a vote of the men.

The railway committee then asked an adjournment until the following day for the purpose of preparing a formal reply. The break came after two weeks of discussion of the detailed application of the terms of the demands and of the railways' contingent proposition for a readjustment of other provisions in the wage schedules. There was no argument on either side as to the merits of the employees' proposition. The formal statement by the railroads, as presented by Elisha Lee, chairman of the conference committee, is as follows:

"The National Conference Committee of the Railways has carefully considered your proposals and your explanations of their meaning and intended application. In our judgment, no reasons developed during our conferences to justify the extraordinary changes in operating methods and practices and the large expenditures for additional facilities which your proposals involve; nor was anything presented to justify your requested radical revision of the established bases of compensation for men in engine, train and yard service. The present rates and rules are largely the result of recent arbitration awards; and, in our judgment, now provide for the men liberal compensation and favorable working conditions. Moreover, the best obtainable estimates indicate that to accept your proposals would increase the cost of operation of the railroads approximately one hundred million dollars a year, all of which must eventually be borne by the public.

"We are confident that you and the men you represent appreciate the responsibilities of this committee to three substantial interests, viz.:

"1. (a) To the employees here involved whose efficient service is acknowledged and with whom the railways have no differences which cannot be considered fairly and decided justly by some impartial body.

"(b) To all other employees of the railways whose material welfare should not suffer because of the preferment of any particular group of fellow workers.

"2. To the owners of the railways, who have a right to participate in the earnings of their business on a fair and equitable basis.

"3. To the public who are vitally interested in the maintenance of an uninterrupted and efficient transportation serv-

ice, and whose ultimate control of the situation we all recognize as fundamental.

"We reiterate the statement given by the railways to their men and repeated to you by this committee, that the railways have no desire to change either the existing rates of pay or working rules, nor to reduce the earning possibilities of the employees under their existing schedules; but your proposals, in connection with the interpretations given during our conferences, are so inherently and fundamentally opposed to the views of this Committee, that we feel constrained to decline and do hereby decline them.

"Our conferences have demonstrated that we cannot harmonize our differences of opinion and that eventually the matters in controversy must be passed upon by other and disinterested agencies. Therefore, we propose that your proposals (consisting of Articles 1 to 4 inclusive, referred to during our conferences as Form 35) and the proposition of the railways, viz.:

That in connection with and as a part of the consideration and disposition of your proposals there shall be open for consideration and disposition those provisions in the schedules or practices thereunder governing compensation in the classes of service affected by your proposals or those in conflict with the following principles as they apply to such classes:

- (a) No double compensation for the same time or service.
- (b) The same classification for the purposes of compensation to be applied to all members of a train and engine crew.
- (c) Two or more differently paid classes of service performed in the same day or trip to be paid proportionate rates according to class of service with not less than a minimum day for the combined service.

shall be disposed of by one or the other of the following methods:

"1. Preferably by submission to the Interstate Commerce Commission, the only tribunal which, by reason of its accumulated information bearing on railway conditions and its control of the revenue of the railways, is in a position to consider and protect the rights and equities of all the interests affected, and to provide additional revenue necessary to meet the added cost of operation in case your proposals are found by the commission to be just and reasonable; or, in the event the Interstate Commerce Commission cannot, under existing laws, act in the premises, that we jointly request Congress to take such action as may be necessary to enable the commission to consider and promptly dispose of the questions involved; or

"2. By arbitration in accordance with the provisions of the Federal law, entitled, 'An Act Providing for Mediation, Conciliation and Arbitration in Controversies between Certain Employers and their Employees,' approved July 15, 1913, and commonly known as the Newlands Act

"This committee urges the most careful consideration of the proposal herein made for submission of the controversy to a Federal tribunal to the end that a peaceable and equitable adjustment may be brought about."

Mr. Garretson replied verbally. Regarding the proposal for submission to the Interstate Commerce Commission he said that following the choice of a member of the commission as an arbitrator by one of the railways (New York Central) several years ago, the commission itself took action that for the future prohibited its members from serving in that capacity, and that therefore he had no doubt that the commission would consider itself incompetent. "And if it did not," he said, "there would be no tendency on our part to make that a tribunal that would dispose of a question of wages, for one reason, at least, that we have always combated the idea that a government tribunal was empowered to fix

wages. Therefore we do not look favorably upon Proposition No. 1 as a means of settlement."

Regarding the proposal for arbitration he said: "The question of arbitration does not need to be dealt with further than its present phase. The attitude of the membership of these organizations, as long as arbitration was an untried fact, not a principle, was largely favorable to arbitration. Our experiences with arbitration have driven a large proportion of the membership of these organizations into an attitude of opposition to that method of settling the question, largely growing out of inability to secure neutral arbitrators who are able to grasp the intricacies of the questions that necessarily come before them for decision. You have been impressed as fully as we have with the inability of men who have been chosen, first to grasp the details of the problems that were put up to them, and second their inability to incorporate in language what their actual intent in many cases was. That sentiment has become more than common or general among the members of these organizations and I say to you very frankly, speaking for myself, that until a condition has arisen which threatens the interruption of traffic (and that condition cannot arise till the rank and file have spoken) I will never agree to arbitrate at this stage of the game. Only the strongest effort has induced the men to abandon expressing in set form a positive instruction to their representatives not to again engage in an arbitration. Therefore, you can readily understand that even if the offer appealed to us, it would be impossible for us to accept a proposition at this time, when no man can truly say that the interruption of traffic is threatened. You will remember that the Newlands act only justifies interference when that is threatened. Therefore, we do not recognize at this time that method as a solution of the problem that we can become a party to.

"If the attitude of the managers' committee is that of absolute declination, there is nothing left for us to do but to go back to the men with an absolute statement of facts as they are and to present to them our conclusions as to the result of what would be the application of your propositions. I say to you in all frankness, the men at home will never go into an arbitration in which are embodied principles that will deprive them of the ability to sell time that they now sell to the companies as an offset to the propositions that we have presented to you."

Mr. Garretson added that had the railroads presented a definite, instead of a tentative proposition "that might have robbed the proposition which we'd made of what seemed to you a portion at least of its most objectional features, then we might have gotten on to a ground that would have narrowed the gulf between us to a degree," but that the proposition made by the railways "appeared so utterly untenable" that the brotherhood officers would not recommend it to the men." He said that arbitration has brought about a tendency on both sides "to fail to take a step toward rapprochement for fear of injuring their own tactical position before a board." "The trouble is, it has grown into a habit," he said. "Only once in the history of these movements have we ever been able to elicit from a conference committee a specific proposition until it became necessary to vote the men."

"I agree with you," said Mr. Lee, "that it is a misfortune that we can't get closer together. There are many things that tie, more or less, all of our hands as you have stated. We felt that there should be some decided change in the practices under the existing schedules. I think we went to a pretty equitable basis."

"I hoped," said Mr. Garretson, "that you might be able to have modified that proposition and put it in definite, instead of a tentative form, on which we four could have taken the matter back to these men (the brotherhood committee) instead of to the men at home, and possibly arrived at some conclusion as to a common ground upon which we could stand. But you bear in mind that everything that each of us

has said, has always been contingent upon a contingency."

"Very true, Mr. Garretson," said Mr. Lee.

"Well, if we have arrived at the time where we have to go back, we have to go back."

"I am afraid it is so," said Mr. Lee.

On Saturday, June 17, the officers of the brotherhoods addressed a letter to the conference committee, stating that they proposed to include in the voting all roads owned or controlled by roads represented by the committee regardless of the exceptions in the authorizations given by the roads to the committee. This question had come up several times during the conference, but the railroad committee had made it clear that it could negotiate only for roads that had given it specific authority. The authorizations of many of the western roads also excepted hostlers and those of some of the southern roads excluded firemen. The brotherhood committee insisted that both these classes of service should be represented. W. S. Stone, of the Brotherhood of Locomotive Engineers, stated that on the southern roads that employ a large percentage of colored firemen and the white firemen are not able to maintain an organization, the engineers would insist on representing the firemen.

The strike ballots were printed at once and the members of the brotherhood committee left New York on Saturday, June 17, to take the votes, which Mr. Garretson said would require about 40 days. After the vote is taken another conference will be held. The ballots contain a brief statement of the results of the conference and the railroads' reply, concluding with the following:

"Bear in mind no definite proposition was at any time made to us by the Conference Committee of Managers.

"The propositions to arbitrate were definitely refused and the refusal received the unanimous endorsement of the body of chairmen present representing the four organizations and the entire matter is now referred to the membership of these four organizations employed upon the lines of the railways, parties to the movement, and to others employed in the capacities represented by these organizations for their vote as to whether or not they are in favor of a strike unless settlement satisfactory to the organizations' executives and the chairmen representing the various committees can otherwise be arranged."

The coupon on which the vote is to be written reads as follows:

"I have personally read the foregoing statement and believe the request for an eight-hour basic day with time and one-half time for all overtime worked in all except passenger service a just demand, and hereby authorize the Chief Executives and General Chairmen of the B. L. E., B. L. F. & E., O. R. C. and B. R. T. to act as my agents or attorneys in dealing for a settlement of these questions, and if the said Chief Executives and General Chairmen are unable to otherwise effect a settlement satisfactory to them, I hereby cast my vote (for or against) a STRIKE."

PENNSYLVANIA APPEALS TO EMPLOYEES

S. C. Long, general manager of the Pennsylvania Railroad, has issued a circular letter to the company's employees asking for volunteers to maintain the company's service in the event of a strike, in part as follows:

"The total cessation of train movement will result in stopping work in all departments, with consequent loss of earnings to all employees.

"We do not believe the contemplated strike will be indorsed by any of our loyal employees.

"This company employs 146,000 men. Of this number only 25,000 are in the train service. It is not reasonable to expect that the wages of the remaining 121,000 employees not in the train service shall be jeopardized or stopped by a strike of less than one-sixth of all the employees.

"Shall these men, in defiance of right and justice, be per-

mitted to stop the operation of the railroad and deprive it of the ability to serve the public?

"Shall they also be permitted to deprive others of the opportunity to earn wages, producing suffering and distress not only among our employees and their families, but the public as well?

"The management, under the law, is required to operate the railroad in the interest of the public, and if a strike eventuates it will be incumbent upon all loyal employees to be faithful to their duty and operate the railroad.

"For seventy years this company has served the public. Many of its men have served the company from twenty-five to forty years or more and are still in its employment. Shall they be thrown out of work and be deprived of a livelihood by reason of a wage controversy among trainmen not connected with their departments?

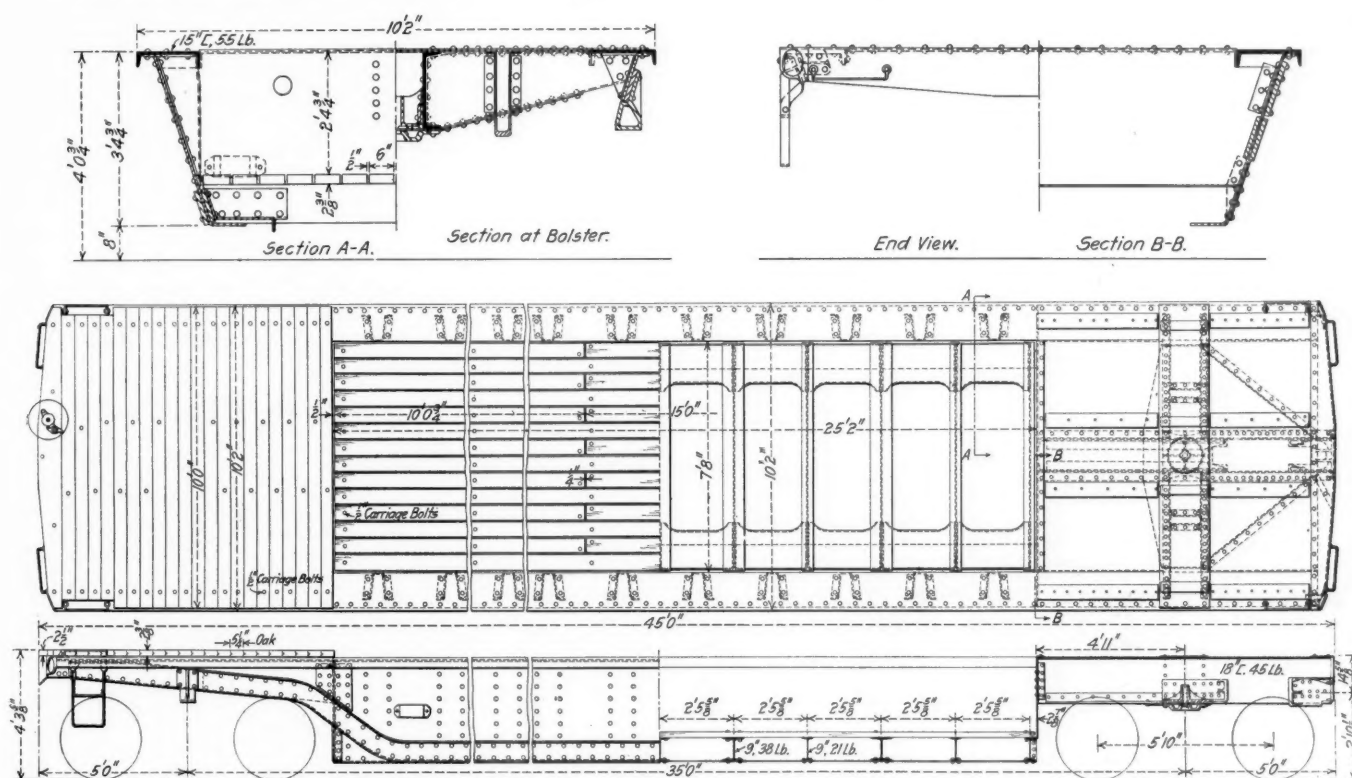
"If this strike of trainmen is carried on our company will

services to assist the company in doing its duty to the public, to the stockholders and to the loyal and faithful employees, will send their names to their immediate superior officer, stating for what service they volunteer.

"The management gives assurance to those who may volunteer and whose services are accepted that they will be retained in the positions assigned to them and receive the same protection that has always been afforded during crises of this nature."

WELL CAR OF 70 TONS CAPACITY

In order to meet the demands for rolling stock suitable for transportation of loads of large dimensions, supported on, rather than suspended through the floor of the car, the Pennsylvania Railroad has designed a well car, two of which were completed for service in February. The car



General Arrangement of the Pennsylvania Well Car

require engineers, firemen, conductors, passenger and freight brakemen.

"The management calls the attention of all faithful employees to the necessity that may arise to meet such emergency.

"Those of you who feel and believe with the management that the traffic of the company must move, regardless of any wage controversy, and who are willing to volunteer their

weighs 57,600 lb. and has a capacity of 140,000 lb., carried on two Crown cast steel side frame trucks, now standard on the Pennsylvania. The trucks have a 5 ft. 10 in. wheelbase, 6 in. by 11 in. journals, and are equipped with steel wheels.

The body bolster is composed of four dished diaphragms and a top and bottom cover plate. The 1/2 in. by 26 1/2 in. bottom cover plate extends across the center sills, tying the bolster diaphragms together, and supports a drop forged

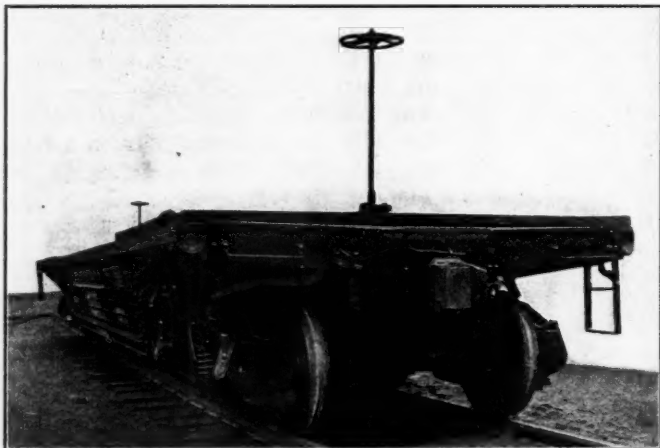


Well Car of 70 Tons Capacity

center plate, above which, securely riveted to the center sills, is a center plate reinforcing casting incorporating the back draft lugs. The center sills consist of 18 in. channels, weighing 45 lb. per foot, extending back only as far as the well hole, and are therefore merely draft arms. Striking castings, which have the front draft lugs cast integral, are riveted to the ends of the center sills, as well as to the end sill.

The end sill, which is a $\frac{3}{8}$ in. steel plate pressed in the shape of an L, tapers back slightly from the striking plate in order to provide additional clearance for the car on sharp curves. The sill extends the full width of the car. The bottom of the horizontal leg of the end sill is flush with the top of the $\frac{1}{4}$ in. floor sheet, which extends the length and breadth of the car as far as the well hole. The floor sheets are riveted to the top flange of the center sills and body bolster diaphragms, thus performing the function of a top cover plate. The body bolster is further reinforced by an additional $\frac{1}{4}$ in. cover plate, 20 in. wide, located on top of the floor sheets immediately above the bolster diaphragms and extending the width of the car. The floor plates are therefore riveted to the end sills, body bolster diaphragms and the well hole end sheets.

The side truss, which is the carrying member of the car, is composed of three distinct parts: A 15 in. channel, 55 lb. per foot, the flanges of which point downward, the web lying in a horizontal plane flush with the top of the floor



End View of the Well Car

sheets, thus giving lateral stiffness to the side structure; a web member consisting of three $\frac{5}{8}$ in. plates in each side truss, a central and two end plates, which are flanged into a horizontal plane at the top and then slope towards the center line of the car at the bottom, the central plate being also flanged at the bottom, thus helping to carry the well hole floor supports; a tension member consisting of two 1 in. by 8 in. plates riveted, one on either side of the web member. The outside plate extends the entire length of the car, while the inside plate is continuous between body bolsters.

U-shaped diaphragms, $\frac{5}{8}$ in. thick, located 2 ft. 5 $\frac{5}{8}$ in. apart and riveted to the web of the 15 in. channel, reinforce the side truss and provide for a possible buckling of the side sheets, while at the same time supporting the top member in such a manner that the entire load may be carried on top of the car when so desired.

The 2 $\frac{3}{4}$ in. oak flooring in the well hole is supported by five 9 in. Bethlehem girder beams, 38 lb. per foot, and six 9 in. I-beams, 21 lb. per foot, located 2 ft. 5 $\frac{5}{8}$ in. apart, and arranged in a manner suited to care for the load located in any part of the well. The floor supports are riveted to the flanged portion of the side truss web and to the floor support spreaders, which are in turn secured to the sides.

The well hole of the car is 25 ft. 2 in. long and 7 ft. 8 in. wide, and since the top of the floor is but 20 in. above the

rail, it is possible to carry a load over 13 ft. in height, while still remaining within the usual clearance limits.

It will be noted from the general drawings that the sides of the car slope inward. This is unusual, but has been brought about to obtain third rail and other low clearances, while preserving a maximum width at the top, and to decrease the weight.

Each end of the car is equipped with an independent air and hand brake on account of the impracticability of running the brake rods through the well hole. Two 8 in. cylinders supply enough power to brake 70 per cent of the light weight of the car.

The general dimensions of the car are as follows:

Length coupled	47 ft. 0 in.
Length over end sills	45 ft. 0 in.
Length between truck centers	35 ft. 0 in.
Extreme width	10 ft. 2 in.
Length of well hole	25 ft. 2 in.
Width of well hole	7 ft. 8 in.
Depth of well hole	2 ft. 4 $\frac{1}{2}$ in.
Height, rail to top of well hole floor	1 ft. 8 in.
Height, rail to top of upper deck	4 ft. 3 $\frac{1}{2}$ in.
Weight	57,600 lb.
Capacity	140,000 lb.

WASHINGTON NOTES

By W. L. Stoddard

WASHINGTON, June 21.

Nearly \$5,000,000 for the Interstate Commerce Commission, \$50,000 for the United States Board of Mediation and Conciliation, and over \$6,000,000 "for railroads in Alaska" are asked for in the sundry civil appropriation bill, which is this week the main business before the House of Representatives. Item by item the commission's appropriations are as follows:

Commissioners and secretary, salaries	\$75,000
General expenses, including for 1916, \$100,000 in deficiency act	1,100,000
Examination of accounts of carriers	300,000
Promotion of safety on railroads	245,000
Valuation of property of carriers	3,500,000
Boiler inspection act, enforcement of	220,000
Total	\$5,440,000

This sum is an increase of \$575,000 over the appropriations for 1916, but is a decrease of \$150,000 over what the commission asked for in its estimates to Congress. There is an increase in the item in the pending bill for general expenses of \$75,000 over last year's appropriation, but a decrease of \$150,000 from the estimates. The other items meet exactly the request of the commission. An additional \$500,000 for the valuation work is recommended. There are no riders affecting the commission's activities.

"For railroads in Alaska" the sundry civil bill carries a total appropriation of \$6,247,620, which is an increase of \$2,247,620 over last year's appropriation. The estimates called for a total of \$8,247,620. Authority is granted to purchase from this appropriation articles and supplies for sale to employees and contractors, the appropriation to be reimbursed by the proceeds of such sales.

The House Committee on Interstate and Foreign Commerce has more than once lately attempted and failed to secure a quorum for the purpose of considering the bill of lading bill. Hearings on this measure were concluded on May 24, but as yet the committee has not begun to write its report, and it is considered doubtful by some if an early report is to be expected.

The second volume of these hearings has just come from the printer and is now available. It contains the testimony of George F. Mead, representing the National League of Commission Merchants, the statements of Charles S. Haight of New York, chairman of the bill of lading committee of the Chamber of Commerce of the United States, and of E. P. Smith, speaking for certain western grain interests.

No progress on the railroad securities bill, the bill to increase the membership of the Interstate Commerce Commission, or on the joint resolution to investigate the need for railroad legislation can be reported this week.

A New Connecting Link of the Burlington

Progress on the 1500-mile Low-Grade Route Is Marked
by the Completion of the Guernsey-Wendover Line

THE Burlington has recently begun operation on a new line 8 miles long between Guernsey, Wyo., and Wendover, closing a gap between the line from Billings, Mont., through Wendover, 671 miles, to Denver and the North Platte river valley line extending 98 miles from Bridgeport, Neb., to Guernsey, Wyo. The continuous line from Billings to Northport, 534 miles, forms the northwest end of a projected low-grade line which will connect Billings with Missouri river points and Paducah, Ky. A comprehensive descrip-

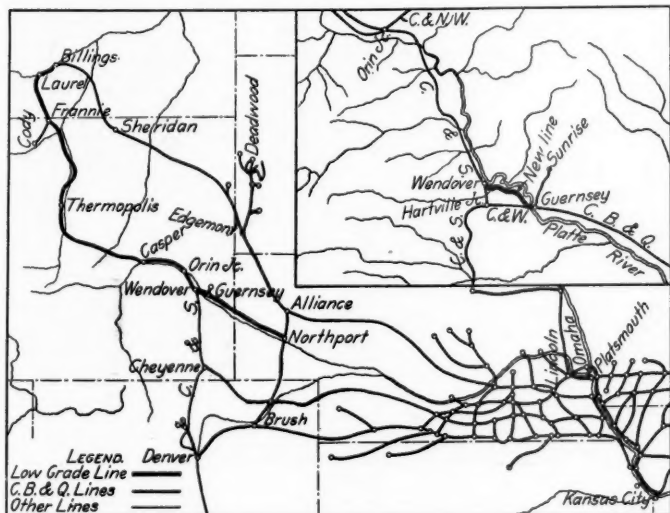
Burlington uses the tracks of the Colorado & Southern, which it controls, under a lease. In the past it used a line already in existence between Wendover and Guernsey via the Colorado & Southern from Wendover to Hartville Junction and tracks of the Colorado & Wyoming from Hartville Junction to Guernsey, which latter road carries an ore traffic from Sunrise, Wyo., where large hematite iron ore deposits of the Colorado Fuel and Iron Company are located. The Colorado & Wyoming operates into the Burlington yards at Guernsey and uses the Burlington station and yard facilities. The line between Hartville Junction and Guernsey has maximum grades of $2\frac{1}{2}$ per cent and curves of 12 deg. The line at one place reaches a summit elevation of 4,730 ft. above sea level.

The use of this line by the Burlington trains involved a switchback movement into Guernsey yard and permitted the handling of only 375 to 400-ton trains with engines of 40,400-lb. tractive effort. Traffic over this line was also subject to frequent delays on account of the congestion resulting from the combined traffic of the two roads.

CHARACTER OF THE LINE

The new line leaves the track of the Colorado & Southern at Wendover on the North Platte river at the south end of a canyon of rare scenic beauty six miles long and follows the general trend of the valley, crossing the river on a high bridge just before entering the yard at Guernsey. The course of the river is very tortuous and the new line is only one-fourth as long as the river route. The country is very rough as the high ridges of the upland project out into the great bends of the river, and the railroad penetrates these ridges by heavy rock cuttings and tunnels.

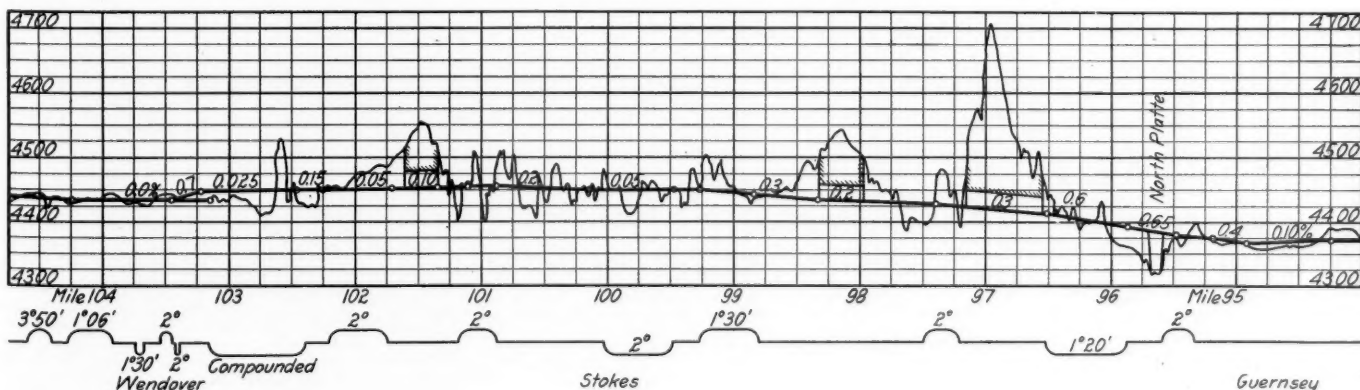
The adoption of maximum grades of 0.3 per cent against westbound trains and 0.15 per cent against eastbound traffic, with curves compensated 0.05 per deg., required heavy grading work after extensive location surveys had developed the most feasible route. Except along the bluff of the river at Wendover, the curvature was restricted to a maximum of 2 deg. The crest of the projected United States Reclamation Service dam opposite tunnel No. 96.85 required the insertion



Location of the New Line

tion of this proposed route appeared in the *Railway Age Gazette* on November 27, 1914.

The portion of the through line now complete has maximum grades of 0.3 per cent in both directions, for the entire distance from Billings, Mont., to Northport, Neb., except for a few pusher grades. With the closing of the gap between Guernsey and Wendover this line becomes available for through traffic from Montana to Missouri river



Profile of the New Line

points via a connection with the old route at Alliance, Neb., and thence east through Lincoln. The connection just completed traverses a picturesque and difficult country involving heavy construction which included three tunnels and a high bridge over the Platte river.

From Wendover northwest 31 miles to Orin Junction, the

of 1.32 miles of 0.65 per cent grade coming out of the Guernsey yard. This is to be operated as a pusher grade, a yard engine pushing out to the entrance of the tunnel, so that with tonnage trains, the road engine will be put entirely through the tunnel, which is 3,334 ft. long. From Guernsey to mile post 97.5 the formation consists of lime-

stone and shales in strata dipping to the southeast; thence to Wendover the line lies in Brule clay formation.

Actual construction work on this line was begun by the Kilpatrick Brothers and Collins Contracting Company, Beatrice, Neb., on section No. 1, which included the long tunnel and approaches, in December, 1913. The grading of the remainder of the line was begun by the same contractors in July, 1914. Necessary retrenchments in the fall of 1914 closed down the entire work, but it was again resumed in February, 1915, and the grading was completed in October, 1915. Work was carried on day and night on the tunnels and on one mile of heavy rock construction. The excavation quantities averaged 43,500 cu. yd. of earth, 6,400 cu yd. of loose rock and 78,500 cu. yd. of solid rock per mile, not including the tunnel work.

Explosives were freely used and steam shovels with 3-cu. yd. narrow gage dump cars handled the excavated material into the fills. Light trestles were used in fills where support was not readily found. Much skill was displayed in getting the steam shovels overland onto the job, the country traversed being very rough.

TUNNEL WORK

The three tunnels are 3,334, 1,929 and 1,442 ft. long respectively. All are on tangent for line and grade and



Large Shot in the Cut East of Wendover

timbered throughout, but except where needed, no side lagging was used. Cordwood was used for filling voids above the roof lagging. Tunnel No. 98.15 required tiling to drain the floor. Tunnel No. 101.47 was wet, the water entering at a seam just above the floor. An 8-in. tile line was laid for the entire length of the tunnel, with a 0.2 per cent. grade down to the east (the grade of the tunnel being to the west). A considerable flow of clear water is maintained steadily, but the tunnel floor is perfectly dry.

In the east end of tunnel No. 96.85 the top heading and bench method of excavation was used and a small steam shovel, operated by air, loaded the muck into 3-cu. yd. dump cars for transportation to the large fill at the west bank of the North Platte river. The west end was taken out by "coyoting" or extending a small central drift at grade on which small cars were used, the excavated rock being handled largely by gravity into the cars.

The heading and bench method was used in the Brule formation of tunnels Nos. 98.15 and 101.47. A large central air plant was erected at the east end of tunnel No. 96.85 to serve both of them, while tunnel No. 101.47 had a separate plant. A maximum coal fuel haul of two miles by team was thus secured. Timbering was carried forward in the

lining close up to the working face of the heading and bench. The timber was furnished by the railroad on board cars at the nearest siding. Fir lumber from the Pacific coast was used throughout. It was not treated by preservatives, but two coats of whitewash were applied to tunnel No. 101.47, and the other two will be treated in the same manner. In all 2,460 M. ft. of tunnel timber lining was used.

STRUCTURES

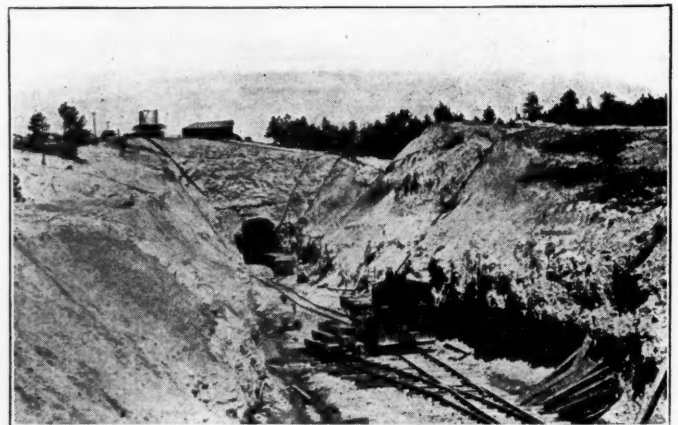
Drainage openings of cast iron pipe and of Burlington standard concrete pipe were provided for small drainage



East Portal of Tunnel No. 98.15

areas, and standard reinforced concrete box culverts were built ahead of the grading for larger areas. Local gravel was used for the aggregate.

At Guernsey, the line crosses over the track of the Colorado & Wyoming on a skew wooden trestle bridge, which also forms the east approach to the North Platte river bridge. The bridge is for single track, and consists of three 125-ft. steel deck trusses with two 85-ft. deck plate girders and

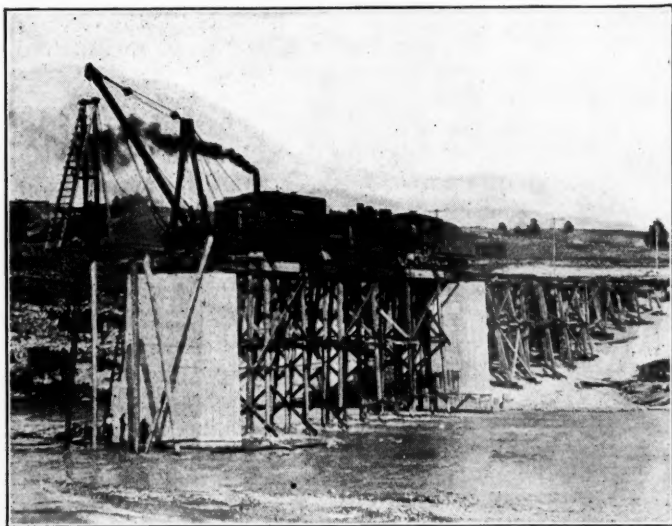


East Portal of Tunnel No. 96.85

timber trestle spans for approaches from the earth embankments at each end. A hand rail and walk is provided on each side of the track on the bridge. The piers are of mass concrete with grill surface reinforcement. The foundations were sunk by the use of concrete caissons with hand excavation in the open, or with dredging through water to depths ranging from 10 to 31 ft., the foundation bed being coarse gravel

or sand except for the pier at the east bank of the river where solid rock was encountered at a depth of 13 ft. High water during much of the construction season retarded the work. The falsework was of piles, driven at rather a high stage of water by swinging leads and a Vulcan steam hammer operated by a derrick car. The track is 69 ft. above the water surface in the river.

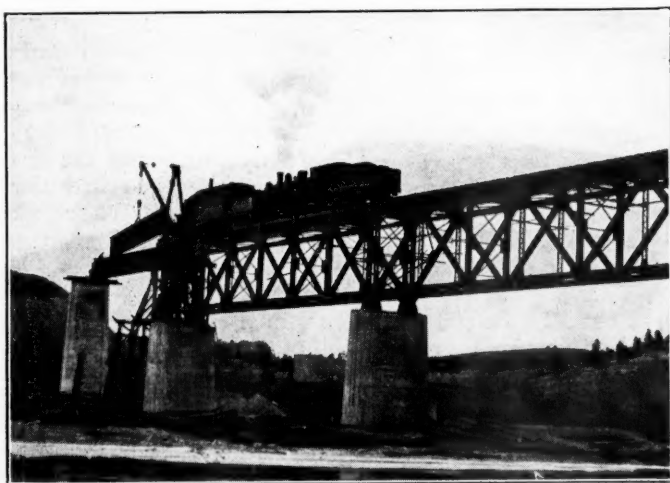
At Wendover, Cottonwood creek is crossed by means of two 30-ft., one 60-ft. and one 40-ft. deck plate girder spans having Burlington standard concrete decks for ballasted track



Derrick Car Driving Falsework with Swing Leads

and three approach spans of open deck timber trestle. A sidewalk and hand rail are provided. The piers are of mass concrete with grill reinforced surfaces, sunk 10 ft. to coarse gravel by open dredging in concrete caissons. The excavated gravel was used for the concrete of the piers. The entire construction of both bridges was done by company forces. A derrick car was used to handle the erection.

An overhead wagon bridge for a highway at the west end of the Guernsey yard, and a timber trestle subway in the middle of the yard provide crossings for vehicles. One pub-



Erecting 85-ft. Girders, Platte River Bridge

lic crossing west of tunnel No. 98.15 on Government land is the only highway grade crossing of the main track between mile post 90 and Cassa, about 15 miles.

TRACK STANDARDS AND TERMINALS

The main track from Guernsey to Wendover is laid with 33-ft. 90-lb. A. R. A. type A. rail from the Colorado Fuel

and Iron Company's Pueblo plant. Four-hole angle bars with round head bolts and square nuts with nutlocks are used. All ties are soft-wood, treated by the zinc process at the Burlington timber preserving plant at Sheridan, Wyo., laid 20 per rail with tie plates on all ties. Gravel ballast from a pit two miles east of Guernsey is used to a depth of eight inches under the ties. Rail anchors are provided for two miles out of Guernsey yard on the pusher grade and through the long tunnel. No expansion was allowed in laying the track through the tunnels in November. Sidings at Wendover and Stokes are laid with second hand 85-lb. A. S. C. E. rail, with continuous joints. The curves are tie plated and gravel ballast is used to a depth of four inches under ties. The new part of Guernsey yard is laid with 85-lb. or 75-lb. A. S. C. E. second hand rail, with tie-plated curves and gravel ballast.

At Guernsey, existing facilities consist of a depot, an ice house, a water tank and a temporary coal shed. The new facilities comprise a 10-stall roundhouse, 100 ft. deep, with an 85-ft. through type turntable, boiler house, sand tower, clinker pit, a 50-ton mechanical coaling station, an oil fuel station, concrete water reservoirs, giving fire protection, a repair yard, stock yards, an enginemen's building, office and store buildings. Guernsey is an engine terminal for the Sterling division, using Newcastle, Wyo., coal for fuel, and also of the Casper division for locomotives using fuel oil.

OPERATION

The despatching of trains is by telephone to Casper and by telegraph to Bridgeport. Between Guernsey and Wendover all trains are handled under positive block rules for following and opposing movements. Use is made of a 4,500-ft. passing track at Stokes, where a telephone is provided for communication with open offices at Guernsey and at Wendover.

At Wendover a temporary grade of 0.7 per cent was inserted connecting with the track of the Colorado & Southern. Freight engines, of the Consolidation type, burning oil and having a tractive effort of 40,400 lb., are used to handle trains of 50 to 70 cars. Two 35-car transfer tracks are provided at Wendover for cars to or from Cheyenne.

The work of construction has been carried on under the direction of T. E. Calvert, chief engineer of the Chicago, Burlington & Quincy; the late C. H. Cartlidge, bridge engineer; F. T. Darrow, engineer maintenance of way, Lincoln, Neb., and Wm. Thomas, resident engineer at Guernsey. The work was opened in 1914, under the late A. L. Hoagland, engineer of construction.

ENGLISH TRAINS TO RUN IN AIR RAIDS.—The English Press Bureau recently issued the following: "As a result of recent experience and special experiments the Field Marshal Commanding-in-Chief the Home Forces has issued to the Railway Executive Committee special instructions with regard to the working of the lights which are to be maintained on railways as well as to the further reduction of those lights, and action to be taken by railway companies on the occasion of raids by hostile aircraft. These instructions provide for the reduction of railway lights other than signal lights in districts threatened by hostile aircraft to the minimum necessary for the continuance of traffic which in the national interest it is important to maintain under all difficulties. Subject to the above necessity railway establishments and trains actually running will be rendered as inconspicuous as possible." This notice means that trains will no longer be held up when enemy airships are about. The trains will run at such a reduced speed that the fire-box door of the locomotives need only be opened for a short time at long intervals. The congestion that the cessation of traffic caused will be greatly reduced. It also shows that signal lights are not the guide that many people think.

CHARLES M. LEVEY

Charles M. Levey has been elected president of the Western Pacific Railroad Company, a new corporation which, on June 28, will take over the properties of the Western Pacific Railway, now in the hands of receivers. Mr. Levey started his railroad career as a telegraph operator in 1871, and has passed step by step through practically every position in the operating department. As general superintendent of the Iowa lines of the Chicago, Burlington & Quincy from 1892 until 1902, he had charge of double-tracking the main line through Iowa and reducing the grades from 70 ft. to 35 ft. a mile. When he became vice-president and general manager of the Western Pacific in October, 1909, he took charge of the construction work already under way and carried it to completion. In August, 1910, he organized the operating department, and has continued as its head up to the present time. His efforts to create traffic on a railroad without feeders and running for the greater part of its distance through an undeveloped and barren country have been fruitful.

Mr. Levey is an excellent executive, broadened by years of training in the operating and construction departments and possessed of a keen understanding of traffic problems and the ways and means of developing new business for a road.

He has always been well liked by his associates and subordinates as well as by the patrons of the roads with which he has been connected. He is reserved in manner, but always accessible and affable. He is fond of sports, and especially of the game of golf.

Mr. Levey was born in Huron County, Ohio, on July 27, 1858. He was educated in the common schools and entered railway service in April, 1871, as a telegraph operator on the Michigan Central. In 1873, he entered the service of the Chicago, Burlington & Quincy in a similar capacity. He was successively telegraph operator, chief clerk to the general agent and trainmaster at Creston, Iowa, chief clerk to the superintendent of the Iowa lines at Burlington, Iowa, chief clerk to the general superintendent and assistant general manager, and assistant superintendent at Burlington, Iowa. From January 1, 1883, to January, 1887, he was assistant general superintendent of the St. Louis, Keokuk & Northwestern and the Chicago, Burlington & Kansas City, auxiliary lines of the Chicago, Burlington & Quincy. From January 1, 1887, to June, 1892, he was general superintendent of the same roads with office at Keokuk, Iowa. For ten years after leaving Keokuk he was superintendent of the Iowa lines of the Burlington with headquarters at Burlington, Iowa. On May 1, 1902, he was appointed general manager of the Missouri lines of the Burlington with headquarters at St. Louis, Mo. He terminated his connection with the Burlington on February 10, 1904, when he became assistant to the president of the Northern Pacific. On June 1, 1905, he was pro-

moted to first vice-president of the same railroad with headquarters at St. Paul, Minn. In October, 1909, he was made vice-president and general manager of the Western Pacific and continued in that capacity until March 5, 1915, when the road went into the hands of receivers. Since that time he has been general manager for the receivers.

REPORT ON BRADFORD COLLISION

The Interstate Commerce Commission has issued a report, dated May 24, and signed by H. W. Belnap, chief of the Division of Safety, on the rear collision of passenger trains on the New York, New Haven & Hartford, at Bradford, R. I., April 17, when 5 passengers were killed. The statement of facts is substantially the same as that given in the *Railway Age Gazette* of April 28, page 952, but is in much more detail. Responsibility for the collision is laid on Flagman Coombs of train 633 and Engineman Mansfield of train 25, the flagman being mentioned first. The inspector concludes that the flagman did not start back promptly; probably not under two minutes; and that the engineman did not observe the distant signal; and the preponderance of the testimony is to the effect that the fog was not of sufficient intensity to obscure the engineman's view of the signals. Engineman Mansfield is 52 years of age and entered the service of the company as fireman in 1882. He was promoted to engineman in 1887 and had a clear record.

The report gives a list of the nine train accidents investigated on this road since July 11, 1911, and again repeats the declaration which was made in the report on the disaster at Westport, Conn., in October, 1912, that "if the human element repeatedly fails, then safety requires that the highest degree of mechanical skill be applied to properly supplement the human element at the particular point of danger." The report

is signed by H. W. Belnap, Chief of the Division of Safety.



C. M. Levey

PERSIA'S FIRST RAILWAY.—A telegram received in Petrograd from Tabriz states that the formal opening of the railway line between Tabriz and Julfa took place May 8. There will be a regular passenger and freight service on the line. The portion of track just opened is a link in the projected railway system which, when completed, will connect Teheran and Persia generally with Europe. Julfa is on the Russo-Persian frontier, and Tabriz, which is about 80 miles south, is one of the most important towns of Northern Persia. In consequence of the serious troubles which broke out there a few years ago and threatened to assume a revolutionary character, it was occupied by the Russians, being within their sphere of influence as laid down in the Anglo-Russian Convention of 1907. The Tabriz-Julfa railway is the only real railway in Persia. There is a small line from Teheran to Shah Abdul Azim, a distance of six miles, but it is more a tramway than a regular railway.

The Reduction of Over, Short and Damage Claims*

Four Discussions of Methods to Remove this Large Drain on the Revenues Received from L. C. L. Traffic

OF equal importance with the reduction in the cost of handling l. c. l. freight is the reduction of loss and damage claims on this traffic. The papers printed below, which were received in the contest on The Handling of L. C. L. Freight, discuss this subject from the standpoint of men directly connected with this branch of railway operation.

LOSS AND DAMAGE

By C. H. Brown

Agent, Norfolk & Western, Columbus, Ohio.

The earnest, wide-awake local freight agent is giving close and thoughtful attention today to the increasing problem of the proper and economical handling of less-than-carload freight. Two results are desired—a reduction in loss and damage claims through the proper and safe handling of freight, and more economical station service through the adoption of labor-saving appliances or through the inauguration of some system for securing greater efficiency from labor. In seeking to effect station economies, the agent is prone to give too little consideration to the large saving possible through a reduction of loss and damage payments which are the result of the improper handling and loading of freight at his station. Naturally, his attention is first directed to the station payroll, not fully realizing that in many instances reductions made there do not prove to be of real economy in the long run, as the decreased labor cost indicated upon the station payroll may be more than equalled by the increased expense of loss and damage claims paid as the result of greater roughness in handling freight and failure to stow it properly in the cars. In other words, the transportation department shows a saving in station labor cost at the expense of the claim department.

The problem of the safe loading and stowing of package freight in cars has greatly increased within recent years. The freight equipment is of heavier construction, the average loading with miscellaneous freight is heavier, and the cars are handled in heavier tonnage trains and at greater speed. There is more rough handling of cars incident to the starting and stopping of trains than ever before; merchandise freight is more diversified in character, and a greater per cent is of a more fragile nature through the increasing disposition upon the part of the shipping public to economize in the expense of shipping containers. That our methods for loading, stowing and bracing freight cars have not kept pace with the progress in other respects, is evidenced by the heavy increases in the payments for loss and damage claims occasioned by the rough handling of freight in transit on the railroads generally.

The remedy may only be secured through a more efficient freight station service. Improved methods of loading and stowing freight in cars must be studied and devised, and a constant inspection maintained of cars under process of loading. An effective and competent freight handling force depends in the greatest degree upon systematic supervision. If the foremen are lax in their methods and supervision, the force generally will be found to be careless and incompetent in its work, regardless of whether the basis of wage payment is the hourly rate, the tonnage system, or

the bonus plan. In order to effect decreases in loss and damage claims, this strict and constant supervision at the station must first and always be directed toward securing proper loading methods. Insufficient attention is too frequently given to the service of the stevedores to see that they are competent for the work required of them. Too much emphasis cannot be placed upon the importance of competent stevedores. They should be brought together frequently and schooled in the safe methods of loading freight generally, or in certain commodities in particular as conditions may demand. A sufficient number of stevedores should be employed so that one man will not be required to supervise the loading of more than six cars at a time. A card report system may easily be devised whereby the destination or break-bulk station will report to the originating station as to the condition of the freight when a car was opened, the cause of any damage thereto which may be found to exist, and to offer suggestions for improvements in loading methods. These reports will be invaluable in giving the originating station a check upon the work of its stevedores. Freight must also be loaded under some effective double-check system, absolutely affirmative in character in order that overs and shorts may be eliminated.

The safe handling of freight offers the most prolific field for securing real economy at the station. This does not prevent further economies being secured through the adoption of the tonnage or bonus systems of wage payment. It is a well-known fact that at those stations where the tonnage or bonus systems are employed the amount of freight damaged in handling frequently is excessive as compared with stations working under the hourly rate. Before adopting either the tonnage or bonus plans, the agent should carefully investigate to ascertain what measure of efficiency is being secured from the freight handling forces under the hourly rate. It is not a very difficult matter to compile data covering several periods of 10 days each showing the average number of tons handled by each loading force per hour, as well as the same information per individual truckman. The average trucking distance, the average time required for loading and unloading trucks, and the weight of the average truckload can be determined accurately. These figures will enable the agent to determine very closely the maximum amount of freight that should be handled per man per hour and what the minimum cost per ton should be were the full measure of efficiency obtained. He is not only made aware of the degree of efficiency actually secured from the force as a whole, and as previously shown in his monthly statements of average cost, but has detailed information with reference to each unit of the force and is in a position to determine intelligently what means are required to give the necessary improvement in the service.

The bonus system of handling freight is wrong in theory, but under certain conditions may prove beneficial in practice to the employer as well as the men. It is generally based on the assumption that in ordinary operation only about 75 per cent efficiency is secured. An arbitrary rate of cost per ton is used as a basis on which the bonus is computed, this arbitrary rate being invariably determined from expenses of the station covering a period of one or more years prior to the inauguration of the bonus plan—i. e., during the periods when only 75 per cent efficiency was obtained! No properly conducted station under any plan of wage payment should have so great a percentage of inefficiency, and, before accepting as a basis the previous average

*The two prize winning papers received in this contest were published in the issue of November 26, page 1005. Five papers on the subject of "Starting Right in Handling L. C. L. Freight Traffic" were published in the issue of January 7, page 5, and four papers on the subject, "Reducing the Cost of Handling L. C. L. Freight" were published in the issue of February 25, page 359.

cost for computing the bonus cost, the factor of arbitrary cost should be adjusted, after careful investigation as before suggested, to indicate what the expense should have been under the full application of proper and reasonable supervision. If this is not done, and the bonus payments are computed upon a prior cost where only 75 per cent efficiency was obtained, the employer continues to pay for more than he gets and the men to receive payment for more than they give. The bonus system will only prove of real benefit to the employer from the standpoint of the payroll, when it produces that measure of efficiency which otherwise would not be obtained except through more expensive and extraordinary supervision.

The tonnage unit is the proper basis for the payment of station labor, but only provided its operation does not result in excessive loss and damage to freight. It is more difficult to eliminate roughness in handling and carelessness in loading and stowing the freight under this plan, and unless given constant and systematic supervision the loss from this source will more than equal any reduction made in labor cost as compared with the hourly rate of payment.

STOWING AND BRACING L. C. L. FREIGHT

By J. R. Jackson

Assistant Engineer of Tests, Atchison, Topeka & Santa Fe, Chicago

The problem of reducing loss and damage to l. c. l. shipments of freight presents a very important field for the investigation and improvement of existing conditions. Owing to the great diversity of commodities included in the average shipment it has been extremely difficult to formulate and place in practice, any regulations, except a few general rules governing such shipments.

At the recommendation of the general committee investigating loss and damage claims on the Santa Fe an investigation of existing conditions and a series of tests to determine proper methods of bracing certain commodities, were undertaken by the Test department. The object of these investigations and tests was to develop data from which a set of specifications governing the proper methods of stowing and bracing l. c. l. freight could be formulated.

As a preliminary step in this work, an investigation of conditions relating to l. c. l. freight shipments was made to obtain first hand information relative to the actual conditions existing at the time the work was undertaken. To this end a number of representative freight houses located at different points on the system were visited. In this investigation, particular attention was given to the condition of the contents of l. c. l. cars after runs ranging from a division to practically transcontinental hauls. Attention was also given to the methods of stowing and bracing followed at the different points and to methods of preventing damage to shipments.

Based on the observations made on this investigation and from the study of general conditions, the freight situation relating to l. c. l. shipments is as follows:

A large percentage of commodities received at the freight house for l. c. l. shipment are not properly boxed or crated for transportation for any distance. There is a tendency on the part of the average shipper to put his goods in flimsy boxes, crates and paper cartons that will not withstand even ordinary handling without liability of damage. Some shippers make no attempt to protect their goods properly while others take every precaution and yet under the present conditions where the railroads are after all the business they can get, it is not their policy to refuse commodities for shipment because in their estimation they are not properly boxed, when some competing line will accept them without question. Until there is an organized movement on the part of the railroads towards the establishment of regulations governing the

acceptance of commodities for l. c. l. shipment, there can be little improvement in general conditions as they exist today. It is necessary therefore to accept conditions as they exist, for the time being and work out plans accordingly.

L. C. L. shipments may properly be classified under two general heads; cars loaded for transfer points and those for local distribution. Under the first classification are included cars loaded at large stations or centrally located distributing points for other points of the same character. These cars go from the point of loading to the point of distribution or transfer without breaking bulk in route. Under the second classification are included cars loaded at receiving or transfer stations for local distribution at points in the immediate vicinity. It follows that a piece of freight shipped from one important station on the main line to another important station on the main line, may go through in the same car with a single loading but that freight shipped to the smaller stations on the main line or on branch lines, is subject to one or more transfers before reaching its destination.

It was found that the transfer cars came through in very good shape, even for the longer hauls. This freight consisted of a great variety of commodities packed in boxes, bags, paper cartons or without packing of any kind but which because of their number and character may be stowed properly to prevent damage due to shifting or overturning resulting from handling the car enroute.

It is with the freight loaded for local distribution that the liability of damage is greatest. This is due to the conditions attending this class of shipments where cars have to be loaded in station order to facilitate handling at local stations along the line. Because of this fact and the conditions at local freight houses where freight is often received up to within an hour of closing time so that it is not definitely known just what the contents of any given car are to be until practically time to place the seals, it is not possible to store the contents of these cars to best advantage to prevent damage to the lading due to shifting or overturning of the contents.

The general practice in loading both classes of l. c. l. freight is to estimate the contents of any given car as far ahead as possible and then to load to give the best distribution possible. To this end the heavier pieces are loaded first and are placed with their longer dimensions lengthwise of the car. During the day, such commodities as are most liable to shift or overturn are anchored by means of cleats or braces. The lighter pieces are then loaded on top, reserving the most fragile until the last. Final distribution of the load is not made until all freight has been loaded, then just before the cars are sealed, a final inspection is made and if cars are only partially filled, the contents are broken down from the ends toward the center.

It is reasoned quite naturally that a large percentage of the damage to freight during shipment is the result of rough handling on the part of the enginemen and switchmen. It is true that elimination of rough handling resulting from carelessness on the part of employees would materially reduce damage to freight cars and contents but because of actual operating conditions and the means at the disposal of the yard, road and engine crews for signalling and handling cars in the yards, and trains on the road, it is not possible to eliminate entirely all shocks commonly included under the term rough handling. For this reason the contents of a freight car must be stowed or braced to prevent damage to contents due to movement in the car caused by these shocks.

As pointed out, this may be done readily by proper stowing in cars where the waybills are available for enough time in advance to permit the distribution of the load to best advantage and where the car is well loaded and does not break bulk enroute. In local work, however, where cars are loaded and unloaded in station order, an agent may load a certain commodity, using the lading directly around it to prevent

shifting or overturning and when at another station further down the road, this lading is unloaded, the piece is liable to become damaged because there is then nothing to prevent its shifting.

The necessity of blocking or bracing certain commodities in a car partially loaded with the great variety of miscellaneous freight found in the average l. c. l. shipment, is apparent, but the determination of what pieces should be so braced and in what manner the bracing or blocking should be applied is not as readily apparent.

A record of all damages paid out for the past few years has been kept and arranged for analytical study. By means of these records it is possible to determine just where the greatest damage is being done and to what commodities. Such a record is most valuable in determining what commodities should be given attention. In making deductions, however, proper allowance has to be made for the possibility that the greater part of the damage to a given commodity is the result of crushing or battering, arising from the movement of some heavy or unwieldy piece loaded in the same car. In all probability the piece that inflicted the damage, was not damaged itself so that the real cause for the damage recorded is not apparent from the records.

An analysis of these conditions led to the following general conclusions:

With the present rules of interchange and practices governing the acceptance of freight for shipment, there is an urgent need for a more general and uniform method of stowing and bracing l. c. l. shipments, particularly local shipments loaded in station order. This can best be accomplished by the formulation of standard rules and specifications, illustrated by photographs representing actual conditions, covering the proper stowing and bracing of commodities found liable to damage, and the co-operation of all concerned to see that they are carried out. Such rules should be worked out so as to be readily applicable by the man actually handling the freight at the warehouses and on the road, particularly at local stations and in way freight service.

Certain commodities, the shifting or overturning of which will cause damage to themselves and surrounding fragile freight, should be selected, and standard methods of bracing worked out and adhered to whenever and wherever that commodity is loaded. Wherever possible the adoption of standard blocking and material for bracing and cleating should be secured and a sufficient stock made available to furnish all stations on requisition, or at least a more general distribution of material available for general bracing.

Having thus established the necessity for the adoption of a method or methods of properly bracing and stowing l. c. l. shipments, it remained to work out such methods as could be put into practice. It is entirely possible with an unlimited supply of material, time and labor available, to brace any piece of freight in a car to prevent shifting or overturning but such procedure would be prohibitive because of the expense involved. It is not always economy to brace a given piece of freight with an elaborate system of timber floor cleats and braces, costing possibly the amount of revenue derived from the freight charges on that particular piece, yet should that piece of freight be left unbraced and cause damage to some costly fragile commodities, the initial cost of bracing would have been justified.

In working out any system of bracing, consideration must be given not only to strength and simplicity but also to the reduction of damage to the interior lining and floor of the car to a minimum. The practice of driving 20d nails promiscuously will soon render a car unfit for the transportation of grains. Tests have demonstrated that it requires a very elaborate structure built up of 2-in. by 4-in. material to hold bulky commodities in a car subjected to ordinary switching impacts, and work is now being carried on to de-

velop a more satisfactory means of bracing which will eventually be put into practice.

REDUCING CLAIMS ON A BOAT LINE

By J. H. Torney

Assistant Manager, Southern Pacific Atlantic Steamship Lines, New York, N. Y.

Our business differs, in some respects, from that of the rail lines, in that we carry no bulk freight, and as a result, less-than-carload freight forms a very much larger percentage of our business than of the railroads. Each station for the receipt and delivery of freight has its own peculiar conditions to be considered in arriving at the most economical and practical method of handling freight. In some cases, reductions in cost of handling may be made by the installation of mechanical devices, while in others, the volume of business moving is not sufficient to warrant such an installation, or the local conditions are such as to make it impracticable. We have installed mechanical equipment where it can be applied advantageously, and have found that the use of electric trucks, particularly on long hauls, has greatly reduced our cost of handling and decreased the damage to freight so handled.

Our experience has been that most of the claims paid are on high class freight, most of which moves in less-than-carload lots. For example, in considering the class of freight on which we are called to pay claims, we can eliminate about two-thirds of our tonnage. About 25 per cent of the remaining one-third on which we do pay claims is l. c. l. business.

Loss and damage claims represent a large item of expense to transportation lines, and while, to some extent, the frail condition of containers and the manner in which unpacked l. c. l. freight is tendered for shipment is responsible for this tremendous drain on freight revenue, the greater causes lie in careless checking, careless handling, and insufficient protection against pilferage, all of which have their remedy, when properly applied.

When freight is damaged while in our possession, owing to insufficient packing, or the manner in which it was tendered for transportation, we notify the shipper and the classification committee having jurisdiction over the territory in which the shipment originated, accompanying our report to the committee with a copy of our billing, and when practicable, with photographs of the damaged freight. In this way, we have accomplished much in having freight properly prepared for shipment.

A careful analysis of our exception reports and claim papers has developed that not infrequently, while the discharging agent reported freight as being received by him in a damaged condition, the receiving agent would report "Received and forwarded in apparent good order." While the reports of the receiving agent were, in the main, correct, they were based on his record of the condition of the freight at the time it was received by him, as against the discharging agent's record after the freight had been landed on his pier, and was ready for delivery or forwarding.

In order to ascertain the real causes for damage and loss occurring to freight between the checking records of the receiving and discharging agents, and thus to intelligently apply an effective remedy, we decided to adopt the following course:

(a) We appointed a chief checker, to oversee the work of the checkers under his jurisdiction, and to educate them in their duties. We assigned special checkers to receive certain commodities, such as candy, drugs, carpets, rugs, firearms, cutlery, shipments packed in glass, perishable freight, and freight liable to pilferage.

(b) We adopted the plan of carrying all case numbers to the billing, and when un-numbered cases are received, we

give them an arbitrary number, which is likewise carried to the billing.

(c) We place identification marks on all shipments of iron and like commodities. A record of these marks is also carried to the billing. We place a stamp on each package, showing the name of the ship on which it is intended to go forward, the trip number, and the date, which assists materially in the identification of the freight if it should go astray.

(d) As soon as each compartment is filled with cargo, it is sealed and kept under seal until the freight is discharged. All partially filled compartments are also kept under seal while the vessel is in port and not working cargo.

(e) We appointed cargo inspectors for each ship, their duties being to carefully inspect all cargo spaces to see that all scupper pipes and scupper drains are clear; to see that there are no apparent leaks in the steam or water lines in the cargo spaces; to see that the cargo is properly dunnaged; to keep a record of all damage occurring in the loading and discharging of the cargo, and damage due to defects in ship; to accompany the ship on the voyage, making a daily surface inspection of the cargo, and noting any evidence of damage or pilferage which may have occurred through the breakage of the seals, and re-sealing the cargo spaces after his duties have been performed. All defects in the ship, causing or liable to cause damage to cargo, are immediately reported by him, and the trouble is promptly remedied.

(f) We engaged special watchmen to keep a careful watch on the cargo while being loaded and discharged, to prevent pilferage.

(g) We place coopers in our ships at the loading port, to re-cooper any freight that may have been damaged in handling, and to strengthen packages which seemed too frail to stand the ordinary handling of transportation.

(h) We appointed billing checkers at New York, to check outward billing against shipping receipts or transfers, so that errors in billing could be detected before the billing was forwarded. In this way, during the last year, we detected at billing point 97.88 per cent of the billing errors made, the undetected billing errors being but 3/100 of 1 per cent of the shipments billed.

(i) We appointed an investigator of over and short freight, whose duties are to investigate the records at the various agencies when claims for loss are received, to endeavor to locate the short freight, and to assist the agents in properly applying their "over" freight. He also brings to the agent's personal attention any disregard of instructions in keeping proper records, of checking freight, preparation of over and short reports, etc.

All claims charged to loss and damage account are carefully examined, to determine the cause for charging them to our line, and the employee whose failure to carry out instructions may have resulted in the claim is promptly taken in hand, with the idea of avoiding similar irregularities occurring in the future. We do not content ourselves with the issuance of general instructions to those charged with the receiving and forwarding of freight, but we have adopted a system whereby we can and do ascertain frequently the record of each man's work.

Several years ago, we discarded the issuance of individual over, short and damage reports, and adopted a blanket O. S. & D. report covering all discrepancies under this heading on each ship. This gives us considerable advantage over the old system of individual reports in matching up overs and shorts.

If transportation lines would see to it that their agents give strict attention to the requirements of Freight Claim Association rule 100 concerning the handling of "astray freight," a much larger proportion of this class of freight would be correctly matched up with the revenue billing covering, and

the possibility of paying claims for the non-delivery of such freight would be greatly reduced. We have arranged with a number of our connections to have their destination agents report back to our delivering agents the actual application of all shipments which they receive from us billed on rule 100 billing. In other words, they furnish reference to the revenue billing, or give bill-of-lading particulars, so that we may locate the billing ourselves. A free interchange of over and short freight reports between immediate connections will also result in mutual advantage.

CARE IN HANDLING FREIGHT TO AVOID CLAIMS

By J. R. Ness

Agent, Atchison, Topeka & Santa Fe, Wichita, Kan.

The warehouse should be checked frequently and stray freight delivered or forwarded to the proper destination promptly. The "over" pile, containing over and stray freight should be checked daily and every effort made to locate the revenue billing over the home or foreign line. An interchange of reports of over and stray freight with connecting line agents at Wichita has brought good results, in connection with periodical meetings of the o. s. and d. clerks of all connecting lines. The card index system is used in writing up the over and short entries to facilitate the matching up of such items at the joint meeting of these clerks. A vigorous effort should be made to secure revenue billing for the open entries by correspondence direct with the shipper, which usually brings results. The aggregate number of over shipments listed and called at these meetings at Wichita with six lines represented, is from 100 to 150 and the time consumed in checking, 30 to 45 minutes. These joint meetings, supplemented by daily joint reports of over freight practically eliminate the possibility of the payment of a claim for shortage filed with one line, when delivery has actually been made to the consignee by another line. The number of open entries covering over and stray shipments received as shown on the records at this station for the six months ending June 30, 1915, is 36, on which revenue billing has not yet been received, and 81 short items on which OK reports have not been issued.

We weight practically all outbound merchandise and reweigh all inbound l. c. l. freight. We find that the reweighing of inbound merchandise is a paying proposition from a revenue standpoint alone, aside from the fact that it eliminates complaints, overcharge claims, and a vast amount of correspondence.

Damage to frail or improper containers can, to some extent, be prevented by extra precautions in stowing. However, it is a fact that a great deal of freight is received for transportation, which is packed in containers entirely too light to carry the shipments intact to destination, the acceptance of which is not prohibited by present classification rules. Damage to freight insecurely crated or with insufficient wrapping or padding, is almost unavoidable unless shippers can be induced to spend a little more money and time in putting the shipments up in such shape that they will reach destination in good condition.

It is a difficult matter to place responsibility for damage to merchandise in transit, but considerable improvement has been made in the matter of rough switching. Inspection of the contents of merchandise cars on arrival at terminal yards will assist materially in placing responsibility for rough handling of cars. Our records show that approximately 23 per cent of the o. s. and d. reports made at this station on l. c. l. freight cover shortages, 66 per cent cover visible damage and 11 per cent cover concealed loss and damage, which indicates that in order to effect a further reduction in the loss and damage account greater efforts must be made to cut down rough handling of l. c. l. freight and some means must be

found to induce the shippers to improve their methods of packing.

Pilferage of merchandise is one of the most troublesome problems confronting the carriers today. Under our system of handling, copies of a pilferage report are mailed to the chief special agent, who investigates each individual case. By efficient organization and persistent effort, the special service department is able to run down a considerable proportion of the cases of theft and pilferage. The fact remains, however, that so long as shippers continue to ship clothing, dry goods and other valuable freight in flimsy boxes (especially boxes with panel ends) without any seal protection, which would serve as a means of immediate notice to the receiving or junction agent, that the package had been pilfered, it will be a difficult matter to effect a large decrease in loss and damage payments chargeable to pilferage. I would suggest that the classification should specifically require a more substantial container for valuable merchandise such as dry goods, clothing, boots and shoes, drugs, etc., and that such packages should be sealed by shippers, cloth or metal strips being used for this purpose.

Shippers should be urged to use a standard size bill of lading, $8\frac{1}{2}$ in. by 11 in., the lines to be $\frac{5}{8}$ in. apart so as to allow sufficient space to clear entries and avoid errors in billing. When billing machines are used, the shipping order should be placed on top, in order to furnish the railroad agent with a legible copy.

Considerable good has been accomplished by joint meetings between shippers and railroad representatives. Recently a permanent organization was effected in this city, composed of shippers, shipping clerks and local railroad representatives which it is hoped will bring about still closer relations with the shipping public, and result in more hearty co-operation on the part of shippers in the efforts being made by the carriers to effect an improvement in the handling of freight, particularly as regards marking and packing.

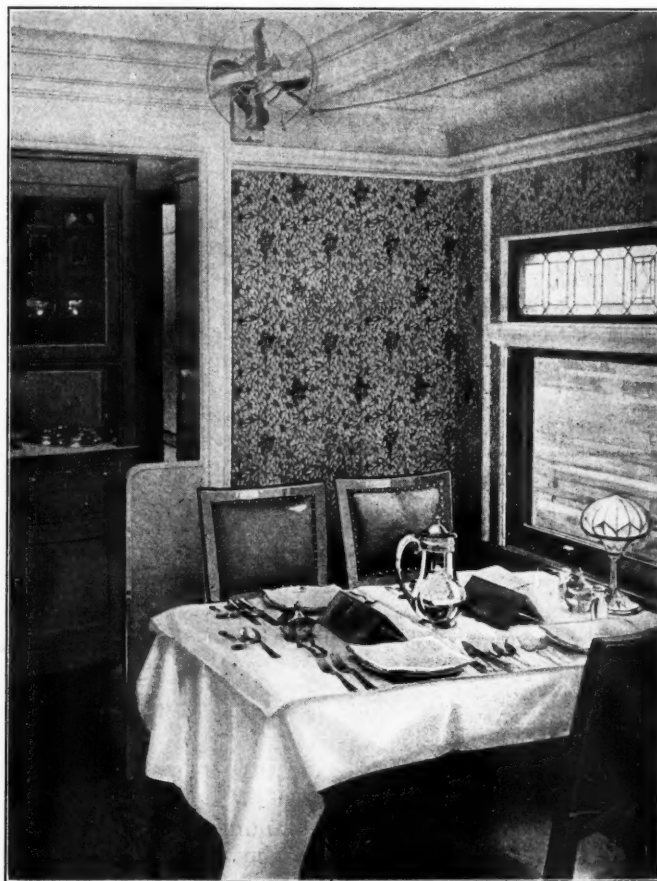
Under our method of handling we obtain a double check on l. c. l. freight delivered to us for shipment. The transfer men or drivers pile the freight on the warehouse floor in consignee and station order. After all freight is unloaded from the wagon, the receiving clerk counts the number of pieces and receipts for the shipment, if correct. When ready to load into the car, he makes a thorough check of each individual package and examines the marks, checking the commodity as shown on the bill of lading. If any errors are discovered, the shipper is notified to return the dray ticket for proper correction, if it has been surrendered, and is requested to recheck the shipment. Under this plan we are able to release the teams quickly and avoid congestion in the warehouse. Consequently we have no complaints from shippers and transfer companies relative to delays in unloading freight from wagons.

We have used the drop truck system of loading during the past four years, under which plan the truckers are prohibited from entering the cars. In loading freight on the trucks, the check clerks aim to have a straight load for one consignee at one destination, but they sometimes are compelled to double up freight for various consignees at the same destination. We do not, however, place freight for different destinations, loading in the same car, on the same truck, if it can be avoided. The block number is marked on the top package of each truck load and the truck is left at the car door or beside the car. A certain number of cars are assigned to each stowman, for the proper loading of which he is held strictly responsible. He examines the marks on each package before stowing it, and breaks down the load in each car before closing the car. We have a head stowman, or loading inspector, who has general supervision over all loading and instructs the stowman as to the proper manner of loading various kinds of freight. We have found this plan quite satisfactory, the average number of errors charged to misloading and im-

proper loading into cars being about 12 per month during the past six months, or approximately one error for each 80 cars loaded.

WALL PAPER FOR BURLINGTON DINERS

The Chicago, Burlington & Quincy has inaugurated a new system of interior decoration for its all-steel dining cars. Wall paper, such as is used in any home, is applied to the inside steel lining and one coat of white varnish is placed over it for protection. The purpose of this seemingly radical departure is to provide a more homelike and congenial appearance to the car. For the first few trips the first car was in service the passengers were handed a slip explaining the purpose of so decorating the car. They were asked to give their views and suggestions in order that the road might be guided in the continuation of this work. It was unanimously voted that the scheme was an entire success and about 95 per cent were enthusiastic in their replies. The first car to



Interior of a Burlington All-Steel Diner Finished with Wall Paper

be so decorated is in use on the Minnesota Limited and runs between Chicago and Savannah. The other steel diners will be so decorated, each to have wall paper of different design. In applying the paper the steel sheets are sized with a mixture made in the paint-shop. A special wall paper is used, one which will receive the coat of varnish without injuring the pattern in the paper. The illustration shows a view at the kitchen end of the car.

RUSSO-SWEDISH RAILWAYS.—The Russo-Swedish conference at Stockholm has drafted a plan for the junction of Russian and Swedish railways by means of the construction of branch lines from Tornea to Haparanda and a railway bridge across the river Tornea.

SINDBAD'S EIGHTH VOYAGE—THE EIGHT HOUR DAY

By Blewett Lee

Know, O my brothers, that after my seventh voyage I determined to go to sea no more and my time was spent in enjoying pleasures.

But one day someone knocked on the door of my house, and the doorkeeper opened, and a page entered and summoned me to the Caliph. I immediately went with him, and kissed the ground before the Prince of the Faithful, who said: "O Sindbad, I have an affair for thee to perform. Know then, that the transportation between Bagdad, the Abode of Peace, and Balsora is in great distress. The owners of the ships are receiving scanty return upon their investments, or none at all. The building of ships has come to an end. Verily, O Sindbad, 82 of the ships are now in the hands of the Cadi, which is one-sixth of all, and for our sake thou wilt go forth this time and employ thy ship in the traffic between Bagdad and Balsora, for the need of the merchant is great." So I replied, "I hear and obey," being unable to oppose this command.

I was compelled to ship my crew upon the same terms as those of the other ships in the business, and the things which now happened to me were more wonderful than anything which occurred during my seven former voyages. Between Bagdad and Balsora, on account of the swiftness of the river, it was necessary to tie up the ship at night and by the mercy of Allah, the all-compassionate, there were cities built along the way only ten hours apart going up stream, so that at the end of each day's work rest and refreshment could be found in them. There were no other places between Bagdad and Balsora where the ships could abide.

One-fifth of the men in my crew had joined themselves into four great Bands, along with the sailors of the other ships, and every time the ship went 100 miles they were paid a day's wages, even though, on account of the swift current in the river, sometimes they would go down from one town to the other in five, four or even three hours, and never in more than six or seven, nevertheless each man received his pay as if he had worked all day; or, if by chance the ship should pass two towns, or even three, during the day, they each received two or three days' pay accordingly, although they had worked only one day.

Sometimes it was necessary, on account of business, to tie up the boat after only one or two hours, but nevertheless the men received pay for a full day's work, even if they had spent most of their time rejoicing with their friends in the city. I found that if a sailor spent a part of his time aloft and a part in the hold on the same day, he was paid for two days' work, and under the rules of the Bands for doing some kinds of work or services he was paid twice, as if he had done two services instead of one. If a ship was compelled by bad weather or accident to return a part of the way, the sailors had to be paid for that particular distance three times, going, coming back and going forward again, although it was all accomplished in a day's work. In case, by reason of fog, or some other ship being in the way, there was a delay in getting the ship into dock, although the sailors had not worked their full day they were, notwithstanding, paid extra wages for the time lost in docking the ship, the same thing being true as to delay in getting started. If, on the way, a ship should encounter another ship in distress, so that it became necessary to stop and aid the injured boat, all of the time spent in aiding the unfortunate ship had to be paid for at a greater price. If the ship should stop at any point intermediate between the various cities to take on camels or goats, or to put off bales of goods, extra wages had to be paid for the entire period that the ship was in the place, and if there were acrobats and dancing girls on board

the ship, and a stop was made in order that they might display their art, the sailors would be paid two whole days wages every time the ship stopped, no matter how short a time it was, and if, while the acrobats and dancing girls were performing the sailors were called upon to do any work, they were in addition paid extra for that. If a sailor was kept away from home longer than he expected, he was entitled to receive pay whether he worked or not. The rules for computing wages were very wonderful, and no one but a wizard could understand them all, but I learned that they were all made to secure more pay for doing the same or less work, and that any rule which brought this about was considered beautiful as a houri, however ill favored it might be otherwise.

On my ship there were four times as many rowers as there were sailors. The rowers worked very hard, particularly going up the river, but they were only paid half as much as the sailors. I wondered greatly because of this, but the Master of the ship told me that it was because the rowers did not belong to the Bands. There were many servants at the towns along the river, who labored at the docks and in the warehouses and brought supplies to the ship and repaired it. Some of them, indeed, were heavily burdened, but none of them received but half as much wages as the sailors. For that matter, neither did the people of the cities along the way, for, as the Master of the ship said, "No Moslem could expect to receive more than half the pay of a sailor, except by the special favor of Allah, the all-merciful."

The highest paid among the sailors worked only certain days in each month, and were accustomed to rest from eight to ten days in every thirty. Indeed, many of them lived better than the Cadis in the cities along the way. But what filled me with astonishment was that those who received the highest pay were the most dissatisfied, and that every year at the time when the Masters of the ships were in the greatest distress, the Chieftains of the Bands would require the Masters of the ships to increase the pay of the sailors who were already receiving the most money, threatening to put an end to all the trade between Bagdad and Balsora unless this were done. For this cause the Prince of the Faithful, in order that the merchants might not be ruined, had required the Masters of the ships to submit the demands of the Chieftains to certain officers called Ahbetrators, who were instructed that under no circumstances should they hear any complaints from the Masters of the ships, and in no event should their judgment leave the sailors any worse off than they were before. So the Ahbetrators every year had ordered the Masters of the ships to pay more money to the most prosperous of the sailors, but nothing had been done for the rowers, because they were not entitled to be treated differently from other citizens.

One day when I was at Balsora and was condoling with the Masters of certain of the ships because, in spite of the great movement of bales of goods, the profits of our business continually shrank, we were visited by the Chieftains of the Bands, who were goodly men to look upon and enjoyed great one another, the Chieftains of the Bands explained to us that no more ships were to go from Balsora to Bagdad until emoluments because of their state. After we had saluted the sailors, who were members of the Bands, were paid extra wages every day after the ships had been eight hours upon their way, whether the ships were going down stream or up. They said that some of the ships could go up stream in eight hours if they were built only half as large and more sailors were employed, but be that as it may, henceforth it would be necessary to pay the members of the Bands one-fourth more wages for doing the same work.

When the Chieftains ceased speaking our countenances fell, for we knew that in order to satisfy them one hundred million gold pieces would have to be paid every year, in addition to the present wages. The Master of my ship

cried out in rage and grief, threw down his turban, slapped his face, plucked his beard and fell down into the hold of the ship. The other Masters saluted the Chieftains, kissed the ground before them and stood hanging their heads in humility. After some words with them on their behalf I addressed the Chieftains. "O Shiekh," said I, "you are our brothers and sincere friends, and the affection for you that is in our hearts is great, therefore favor us with a reply. We beg thee, our brothers, to graciously consider in our behalf certain proposals by the owners of the ships, upon whom Allah has laid the burden of finding the necessary gold pieces. Since over-time is to be paid for all work done over eight hours, we propose that everybody shall work eight hours each day; that no one shall be paid a day's wages who has not done eight hours' work, and that no one shall be paid anything for work which he has not actually done, or be paid twice for the same work." The Chieftains were very stern and their countenances were so formidable that I did not dare to ask that the owners of the ships should be allowed interest on their investment, although I could not help seeing that no more ships would be built until this was done, and the merchants of both Bagdad and Balsora were complaining bitterly that they were being ruined because there were not enough ships to carry their goods.

The Chieftains of the Bands consulted briefly among themselves, after which their spokesman said unto us, "O my Masters, may Allah bless you, for you seem to have no other friend. It is a matter of indifference to us whether you accept our terms or not, but no ships sail from Balsora except according to the word which we have spoken."

At these words we were filled with dismay, for the command of the Caliph, to whom be peace, was heavy upon us, and we knew that because of the merchants it was as much as our lives were worth to tie up the ships. The Masters of the ships finding that it was impossible for them to go on as they were doing and pay in addition the one hundred million pieces of gold, ceased the use of their large ships and engaged instead twice as many little ones. At first, this arrangement pleased the Chieftains of the Bands very much, as it increased the numbers of those in the Bands. It was not long, however, before there were many complaints of ships falling afoul of each other in the stream, and many more of them were sunk than had been the case with the larger ones. It also came to pass that although the smaller ships would run faster, two of them would not carry as many bales of merchandise as one of the larger ships, so that the goods piled up upon the wharves, and the Cadis in every town threatened the Masters of the ships with imprisonment and bastinado.

Since, notwithstanding the little ships it was often impossible to get from one city to another in eight hours instead of ten, the Masters of the ships plucked out their beards by the handfuls, and made great lamentations. Some of them hit upon the plan of building new towns only eight hours apart, so that the ships could reach them without the payment of overtime. The new towns were miserable little villages, and no sooner did the ships start using them than straightway the citizens of the old cities complained bitterly to the Caliph, may he be blessed forever, that their lands had become worthless and their business was falling away. Not only this, but the sailors were very bitter against us, because under the new arrangement they earned much less than they did before the Chieftains had visited us, and although very many of them received a day's wages for working but a few hours, and did not work at all many days in the month, they were grieved because they could not earn more than a day's pay on each day that they worked. Last of all, the merchants along the route, who had been compelled to pay more than ever for the transportation of their goods, and who had found it necessary to meet the demands of the Chieftains for increased payment of wages, since we had no

money to do so, our own fortunes already having been swept away in obedience to the commands of the Prince of the Faithful, complained also to the Caliph with many bitter groans and lamentations.

The good Haroun Er Raschid sent for me to my secret place in Bagdad where I was hiding from the Bands. I went before him and fell at his feet and said, "O my lord, I have a horror of voyaging and when it is mentioned my limbs tremble and this is because of the terrors and troubles I have experienced. Moreover, under no circumstances do I dare to go forth from Bagdad." Then I informed the Caliph of all that had befallen me from first to last and he wondered exceedingly thereat and said, "Verily, O Sindbad, it hath not been heard from times of old that such events have befallen anyone as have befallen thee!" When the Caliph found that my fortune was exhausted, my business at an end, and that death had no more terrors for me, in his royal mercy and compassion he purchased from me my ship, and although the recompense was very small and my loss very great, I thanked Allah, whose name be exalted.

After this time the business of transportation between Bagdad and Balsora was conducted by the officers of the Caliph himself. The amount of wages that the sailors received was fixed by the Cadis, and if any sailor refused to go out with his ship he was punished for conspiracy to delay the business of the Realm. The Caliph made the ships sail between the old cities instead of the new towns, and brought back into use the large ships instead of the little ones. The Prince of the Faithful also commanded that the Bands be broken up and threw the Chieftains into prison. By this time the merchants were greatly pleased to have their goods move at any price, and although the rates were higher than ever before, they praised Allah, whose name be exalted, because their goods were moving at all.

And this is the end of the history of the events that happened to me during my eighth voyage, and praise be to Allah, the One, the Creator, the Maker!

A GRAPHIC TRAIN SHEET

By F. W. Rizer

The form of train sheet which is almost universally used in American railroading is little more than a moze of figures. It is believed that the substitution of a graphic train sheet

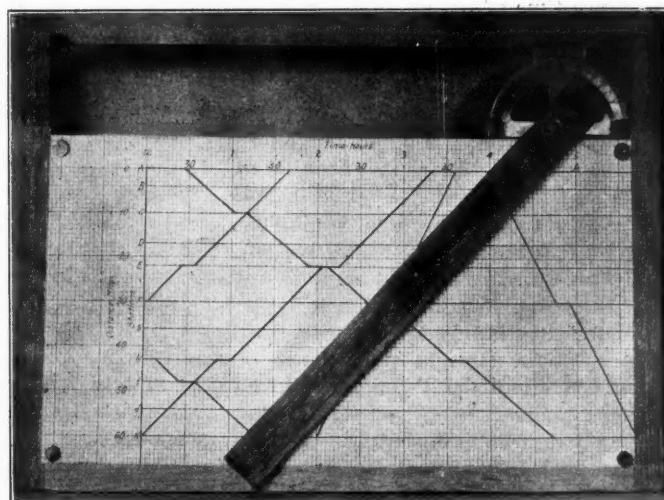


Fig. 1—Model Board Showing Graphic Sheet and Adjustable T-Square

would afford a much more efficient and accurate method of despatching trains, resulting in a saving of time for despatchers and the elimination of many of the errors inherent in the present system with the resulting increases in the cost of

train operation. With this object in mind, the system described and illustrated herewith has been worked out.

Fig. 1 shows a model board with dimensions about one half those that would be required in actual practice, on which is mounted a section of an imaginary train sheet for a six-hour period and covering about half a division. The time and distance scales on the model are about as they should be on an actual sheet, i. e., one hour equals two inches, and ten miles equals one inch. The adjustable T-square shown in this illustration would not be used in connection with making the train sheet or determining meeting or passing points and would ordinarily be turned up out of the way. It is intended for use in the case of special schedules, for checking the observance of speed limits, laying out new schedules, etc.

In addition to the board and T-square shown in Fig. 1, a set of templets made preferably of celluloid, and cut to the shape shown in Fig. 2, would be required. One of these templets should be provided for each class of trains in both directions. It is assumed that all freights would stop for water at E and H and all passengers at F. Fig. 2 is intended to demonstrate the use of these templets in determining a meeting point for a westbound freight and an eastbound scheduled passenger. By sliding the templet for westbound freights (represented by the triangular piece in

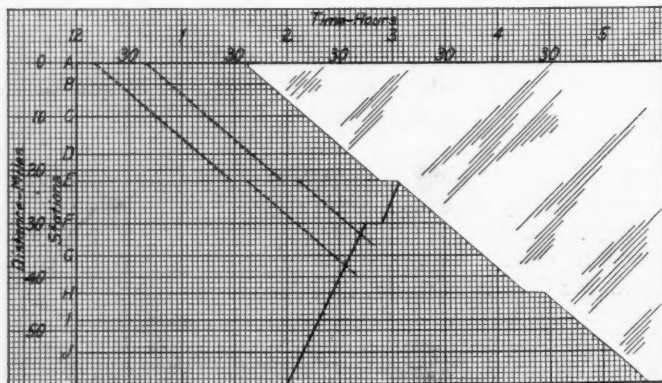


Fig. 2—The Use of the Standard Templets for Determining Meeting Points

the cut) from right to left it can be seen that the assumed clearance time of ten minutes can be secured at station E, if the freight leaves A at 1:36. If it is ready to leave before this time the meet could be made at F by leaving A at 12:40. In order to meet at G, it would be necessary for the freight to leave A at 12:10. Passing points for trains of two classes could be determined in similar manner.

In using the T-square for checking the observance of speed limits and laying out new schedules, it will be noticed that the scale on the adjustable arc is graduated in miles per hour, so that the corresponding speed for any position of the straight edge can be read directly. In a working model these dimensions would be shown for at least every five miles an hour. In plotting the progress of a train on the graphic train sheet the straight side of one of the templets or the straight edge of the T-square could be used to connect two adjacent points. In order to make the record complete and of the greatest value the train or engine number, the number of cars loaded and empty, and such additional information as is desired for each train should be entered along the line representing the terminal station.

PRODUCTION OF COPPER IN THE UNITED STATES.—The production of copper (smelter output) in the United States in 1915 was 1,388,000,000 lbs. as compared with 1,150,000,000 lbs. in 1914 and 1,224,000,000 lbs. in 1913.

INCREASING PRICES OF MATERIALS

W. C. Nixon, receiver and chief operating officer of the St. Louis & San Francisco, has issued a circular to officers and employees of the road, calling attention to the need of economy in the use of supplies on account of the increasing prices of materials. He says in part:

"Our circular dated March 13, 1916, showed the prices on material and supplies had increased 53.6 per cent. At present the price of this same material and supplies, excluding fuel, rails and ties, has advanced to 63.7 per cent, a further increase of 10.1 per cent.

"These advances will continue, making it all the more obvious that every possible economy in the use of material and supplies should be exercised. Our purchases last year of miscellaneous material amounted to \$3,314,753.00. This same material at the current market price of March 13, 1916 (the date of our last circular on this subject), would amount to \$5,091,460.00, and at the current market price June 1, would amount to \$5,426,251.00.

"Herewith I present a statement showing the percentage of increase in the market price of materials prevailing today over the prices of 1915 and of March, 1916. Emphasis is laid upon the need for making partial repairs at the present time instead of complete renewals. You may find structures and facilities which, under normal conditions, it would be better to renew than to repair in part, but the abnormal prices now prevailing necessitate special care along these lines. Much betterment work in contemplation should be deferred even though such action may increase operating costs, as the present price of material will frequently more than offset the increase in operating costs. However, repairs or renewals should be made when neglect of a condition in any way endangers the safety of employees or the public.

"It is believed that everyone will give careful attention to this circular and aid the management in economical operation by following the suggestions it contains."

Appended is a list of articles on which the increases range from 80 to 700 per cent and another list on which the increases range from 10 per cent to 80 per cent. The first list is as follows:

INCREASES RANGING FROM 80 PER CENT TO 700 PER CENT

	Per Cent March 13, 1916.	Per Cent June 1, 1916.
Acids	168.5	385.3
Axles, Car and Engine.....	200.0	206.0
Antimony and Babbitt Metal.....	193.6	200.0
Bolts, Machine and Carriage.....	80.3	136.6
Bolts, Track	85.0	112.0
Brass, Bar, Sheet and Spring.....	122.0	134.0
Bridges, Steel	140.0	187.4
Car Forgings	40.0	94.0
Castings, Malleable	80.0	109.0
Castings, Brass	85.0	81.5
Chains, all kinds.....	63.3	85.8
Copper, Bar and Sheet.....	82.8	90.2
Covering, Pipe, all kinds.....	100.0	125.0
Draft Gear, Miscellaneous.....	49.4	82.0
Drills, all kinds.....	241.7	241.7
Fencing, Wire	58.0	155.9
Ferrules, Flue	140.1	171.7
Files	20.0	80.0
Flues, Boiler	100.0	100.0
Gasoline	181.5	172.6
Iron, Common Bar.....	75.0	94.7
Iron, Galvanized	89.2	93.2
Iron, Black Sheet.....	100.0	100.0
Lagging, Boiler	97.0	164.7
Nuts, Square and Hexagon.....	122.5	158.3
Pins, Locomotive Crank.....	146.1	146.1
Pipe, Galvanized	89.2	89.2
Rivets, all kinds.....	96.1	127.3
Rods, Piston	166.6	166.6
Rope, Wire	95.0	81.0
Screws, all kinds.....	64.0	123.0
Spikes, Track	80.0	117.0
Steel, Fire Box and Flange.....	137.0	144.8
Steel, Tank and Plate.....	150.0	195.8
Steel, Tool, High Speed.....	700.0	700.0
Superheaters and Parts, Locomotives.....	100.0	100.0
Tie Plates, Metal.....	140.8	146.4
Tubing, Brass, Copper and Steel.....	86.8	160.3
Vitriol, Blue	373.7	468.4
Washers, Malleable	80.0	80.0
Waste, Cotton and Wool.....	58.2	81.8
Wire, Copper and Brass.....	93.4	131.2
Zincs, Battery	98.3	103.4

Swing Bridge Over the Little Calumet River

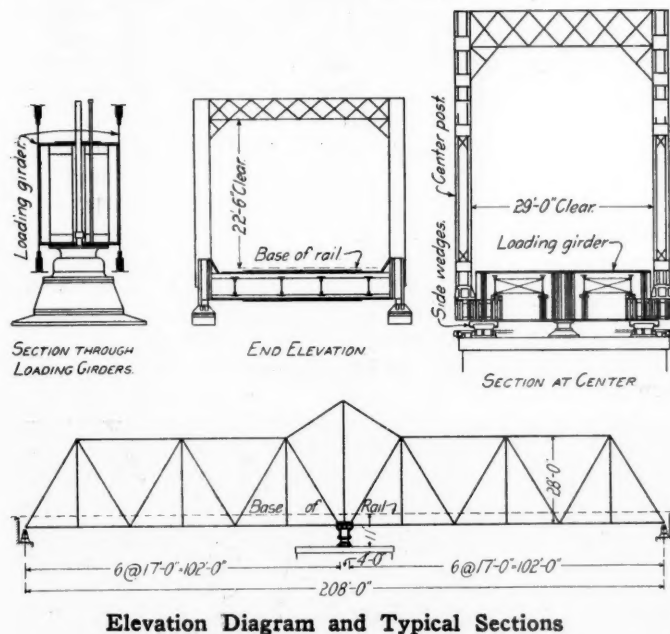
The Chicago & Western Indiana Has Recently Completed
a Structure Involving a Number of Ingenious Features

IN renewing the superstructure of a swing bridge over the Little Calumet river in the city of Chicago, the Chicago & Western Indiana took account of the fact that this stream is seldom used by boats of a size requiring the turning of the bridge which carries a heavy traffic. As a result a design and operating plant were adopted which are particularly applicable to the condition of infrequent turning and the problems imposed were solved with a number of interesting details.

The bridge is a double track symmetrical swing span composed of two independent arms, consisting of 6-panel riveted Warren trusses 102 ft. long, center to center of end pins, which act as simple spans when the bridge is closed. When swinging, the two arms are supported from their inner hip joints by tie members connected to a structural steel

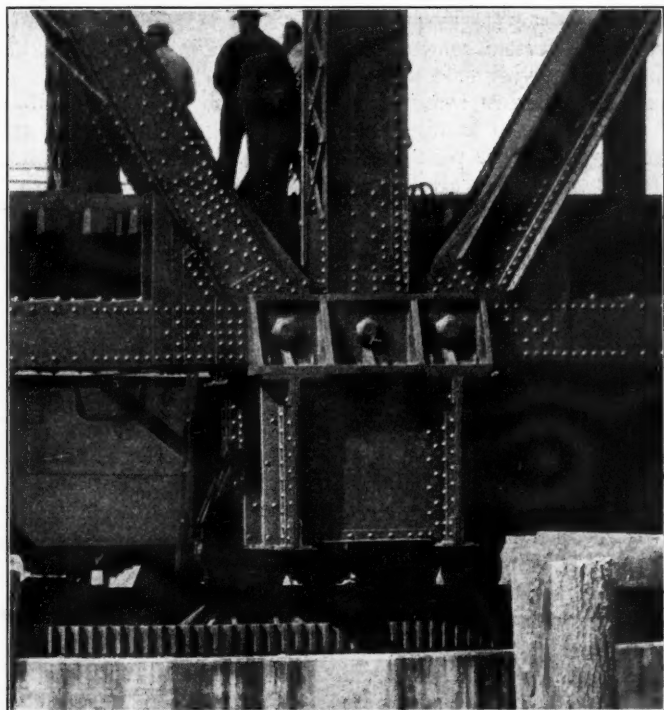
plates 12 in. by $\frac{5}{8}$ in. At the truss bearings they are cut down to a depth of 3 ft. 11 $\frac{3}{4}$ in. When the bridge is open, i. e., the side wedges withdrawn, these girders carry the dead load of the span to the center. When the bridge is closed the dead load of the truss is carried directly to the wedge bearings and the loading girders serve only as floor beams to carry the load of the center panel.

The end lifts are of the toggle type and consist of two links, one above the other, as shown in the accompanying photographs, which illustrate both the open and closed positions. The upper link is suspended from the end pin of the span and in turn carries the lower link, the two being connected by a 9-in. pin. The lower link or rocker has a tread on a 2 ft. radius and bears on a pedestal 4 ft. 4 in., long and 2 ft. 3 in. wide. The lift is operated by a strut connecting the pin between the two links to a crank pin on the operating machinery. To lower the end bearings preparatory to opening the draw the strut pulls the connecting pin toward the center pier causing the lower link to roll on its bearing until the rocker strikes a stop. Further movement of the machinery lifts the rocker clear in an approximately vertical direction. When the machinery stops a tooth on the tread of the rocker fits loosely in a groove on the bearing pedestal. This serves as a guide to correctly mesh a set of gear teeth in the bearing faces of the rocker and the pedestal, when



bent located in the plane of the center. There are pin connections at both the top and bottom of the center bent columns and at each end of the tie members. The pin hole for the tie connection in the hip joint of one of the spans is slotted a sufficient amount to relieve the tie members of any stress when the two spans are in bearing at their outer ends. When thus raised in the closed position, these end bearings are five inches higher than when the bridge is swinging from the center.

The bridge is of the center bearing type with a phosphor-bronze lenticular disc 2 ft. 2 $\frac{3}{4}$ in. in diameter between cast nickel steel bearings. An accompanying photograph and a drawing show the loading arrangement. The bottom of the post of the center bent and the end bearings of the two arms are brought together in a cast steel shoe which spans between the ends of a pair of loading girders, a separate pin being provided for each of the truss bearings and the center posts. The loading girders are placed transverse to the axis of the bridge and rest on the center and on four side bearing wedges, one under each end of each of the two girders. Inside of the trusses these girders are 8 ft. 1 $\frac{1}{2}$ in. deep and each is made up of two webs $\frac{5}{8}$ in. thick with flanges composed of two angles 8 in. by 3 $\frac{1}{2}$ in. by $\frac{5}{8}$ in. and side



Loading Arrangement at the End of the Loading Girders

the bridge is being swung into the closed position. A cam attached to the rocker operates the latch bar which locks the bridge in the closed position. The arrangement is such that the latch bar is not withdrawn until the rocker is clear of the bearing and similarly, the latch bar is completely in place when closing the bridge before the rocker comes to bearing.

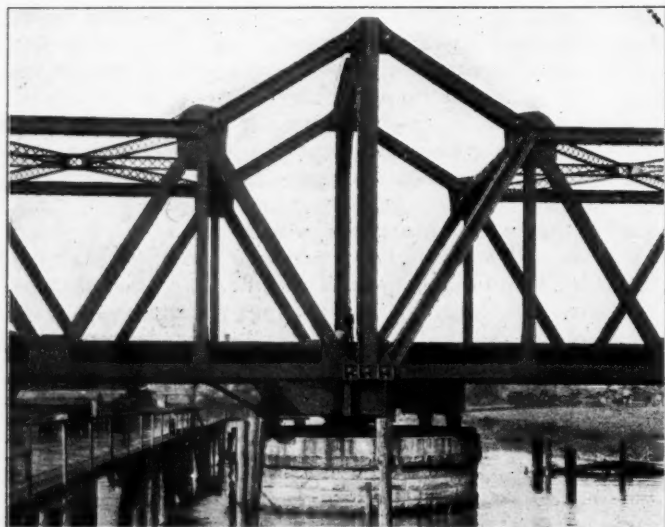
The centering latch consists of a casting bolted against the backwall on the center line of the bridge with a slot into

which the latch bar is driven. The edges of this slot are equipped with 6-in. rollers and the end of the key or bar is beveled on the edges. The driving of the bar therefore serves to center the bridge for a deviation of 4 in. each side of the exact closing position. The rail locks are of the sliding tongue type.

The bridge is electrically operated, using 220 volt direct current. On the center are one 40-hp. motor to turn the bridge and one 6-hp. motor for the side bearing wedges. At each end of the bridge is a 40-hp. motor for the end lift and one 6-hp. motor for the rail locks. The arrangement pro-

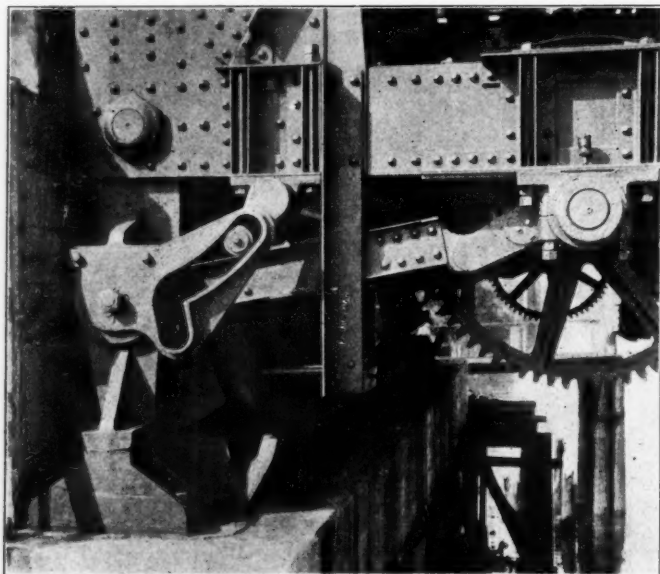
one hour, with a final pressure of 190 volts and a capacity of 500 amperes momentarily, at a final pressure of 180 volts. The normal charging rate is 50 amperes.

The turning machinery, in addition to electric braking is



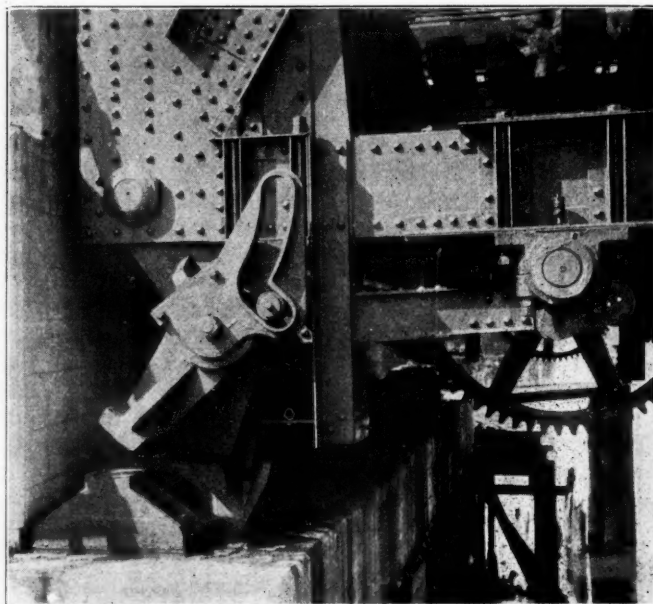
The Arrangement of the Trusses Over the Center Pier

vides for remote control, a building on the north bank of the river serving as a signal tower and power house. This simplifies the interlocking arrangement and makes it possible for one man to handle the bridge turning and signals as well as the power plant. Owing to the irregularity and infrequency of the call for power to turn the bridge it was decided to use storage batteries charged by a gas engine-generator set to be run only as the batteries require recharging.



End Bearings in Lowered Position Ready to Swing

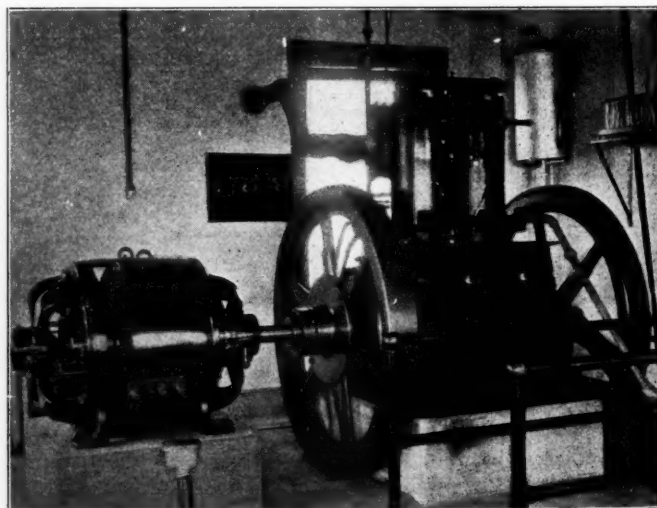
This arrangement includes a Roth Brothers 57-ampere, 350-volt direct current generator, direct-connected by means of a Franklin flexible coupling to a 30-hp. Nash gas engine. The storage batteries have a capacity of 200 amperes for



End Bearings in Raised Position Ready to Take Traffic

equipped with an air brake for which air is supplied by a National Brake & Electric Company motor compressor with a capacity of 13 cu. ft. of free air per minute to a pressure of 90 lb. per sq. in. Storage is furnished by a tank having a capacity of 50 cu. ft.

Because of the remote control feature, all operations are carefully safeguarded. Controllers for all the motors are



The Engine Generator Set in the Power House

electrically interlocked to insure completion of the necessary preceding operation before starting them, including mechanical locking between the controllers for the several motors, to avoid the possibility of simultaneous operation of motors having interfering functions. In addition, electric interlocking is provided between the apparatus controlling the bridge and the interlocking machine to avoid any conflicting movement. Light indicators are provided which indicate bridge open, nearly open, nearly closed and closed, lift up, lift down, and center wedge and rail locks in and out.

The tracks are protected by a mechanical interlocking

plant for which a 24-section Saxby & Farmer machine is provided. Only 15 levers are used at the present time, but additional space was provided for a future four-track line on the north reducing to two tracks at the bridge.

The house is of brick construction with a concrete foundation. The interlocking plant, all control apparatus and the gas engine-generator sets are in a single room on the first floor. The batteries are in a separate room with communication only on the outside to avoid the possibility of fumes reaching the operating room. The compressor plant and tanks are in the basement, which also contains a hot water heating plant.

The new bridge superstructure is supported by the masonry which carried the previous structure. A new 18 in. coping on the center pier and new backwalls and bridge seats for

The bridge was fabricated and erected by the American Bridge Company, Gary plant. The general design and supervision for the railroad was under the direction of E. H. Lee, vice-president and chief engineer, and F. E. Morrow, assistant chief engineer, in co-operation with A. F. Robinson, bridge engineer of the Atchison, Topeka & Santa Fe. All of the electrical features were worked out by F. E. Jacob, signal engineer, in co-operation with C. H. Norwood, consulting electrical engineer, Chicago.

DELAWARE & HUDSON HISTORY

The accompanying chart shows on a percentage basis the mileage of the Delaware & Hudson built in each year since the first gravity road was built in 1829. It will be noted



Percentage of Delaware & Hudson Built Each Year 1829-1907

the abutments cover all the changes that were required. The old span was removed and the new one erected on falsework across the channel during a temporary interruption of navigation.

that a little over 50 per cent. of the road was built before 1868. The years 1852 and 1865 were the ones in which the greatest mileage was built. The chart was prepared by the valuation department of the Delaware & Hudson.

GOVERNMENT REPORT ON GOLLOS AUTOMATIC TRAIN STOP

The Interstate Commerce Commission has made a report to Congress on the tests which have been made by the Division of Safety on the automatic train control system of the Gollos Railway Signal Company of America, Chicago, and the report has been printed as House Document No. 1192. The tests were conducted on the Chicago, Burlington & Quincy between Sugar Grove, Ill., and Big Rock, near Aurora, on the single track line between Aurora and Savanna. Experimental runs were made between August 10, and October 1, 1915, and, after a number of changes had been made in the apparatus, between February 26 and March 31, 1916.

The plans of this device were presented to the commission in May, 1912, and the apparatus was tried by the proprietor on the Chicago Great Western, near Sycamore, Ill., between September, 1912, and April, 1913. Plans were again presented to the Interstate Commerce Commission in October, 1913, and these were approved, for test, in April, 1914. The apparatus was installed on the Burlington between October, 1914, and March, 1915, and the tests now reported were begun on August 10, 1915. The installation comprises 14 track circuit sections with 18 ramps, 8 for westbound movements and 10 for eastbound. The locomotive used in the test was No. 2060. With this engine a number of all-day tests were made. But a considerable part of the record consists of observations made when the engine was in regular service on the local freight, running over the line but once a day.

The contact shoes were mounted on the forward tender truck, one on each side, and the use of one or the other was determined by a reverse switch operated by the locomotive reverse lever. The apparatus was put into or out of operation, according to the speed of the movement of the train, by means of a governor, carrying electrical contacts and mounted on the forward tender axle. The system included an electrical recording device with a lamp indicator and two air whistles in the cab.

The total number of tests made was 917, the results of which are classified as follows: train control apparatus, satisfactory operations, 85; unsatisfactory operations, 22; safe failures, 40; false-clear failures, 4; total 917. Cab signal, satisfactory, 907; failures, 10; total, 917. Cab indicator, satisfactory, 823; failures, 94; total, 917. In addition to these there were 28 safe failures of the train control apparatus, and 64 false light indications at points other than ramp locations.

The line of road where the apparatus was installed is worked by the manual block system and the stop apparatus had no connection with block signals.

Under the head of unsatisfactory operations, the report includes all failures to work; so that if the apparatus had to be cut out at the beginning of a run there would be unsatisfactory operations at every ramp during that run, or ten in all.

The four false-clear failures were caused by abnormal conditions of the apparatus that were created primarily for the purpose of securing data regarding the margin of safety afforded by the working limits provided by the installation; and the precise reasons for the failures cannot be clearly explained without a drawing, which, although referred to in the report, is not furnished. These and most or all of the other failures were due, the report says, to defects in detail of design or construction which are explained at considerable length but which are briefly summarized in the last page of the report as follows:

"While certain of the objectionable features embraced in the apparatus as first tested have been eliminated or corrected, the conditions under which the last series of tests were made (March, 1916) resulted in such an unsatisfactory

record that the revised system in its present form can not be recommended. However, the poor performance record was a direct result of details of construction and lack of proper preliminary development tests and maintenance work by the proprietor, rather than the result of any inherent or fundamental defect embraced in the system. The apparatus, particularly the governor, should be developed to a much more advanced condition of reliability before being given further consideration.

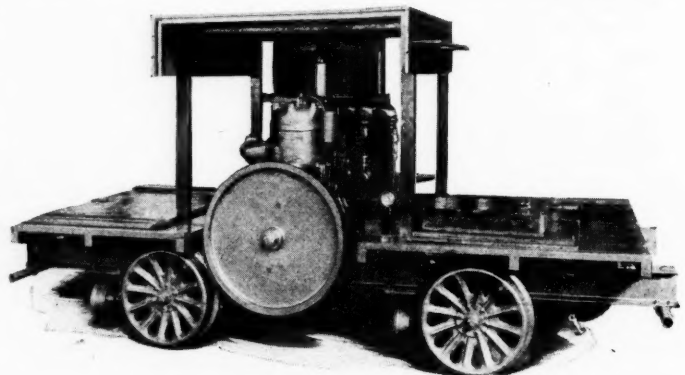
"Such tests as have been made under snow and ice conditions were not at all conclusive, and no opinion can be expressed at the present time regarding the reliability, under such conditions, of the method employed in this system of making electrical contact between track and engine apparatus."

The principal changes made between the tests of 1915 and those of 1916 were the elimination of the arrangement for placing the apparatus in "caution" condition whenever the rate of speed was below a certain figure; the arrangement of the air brake control so that it can be cut out of service; and the relocation of the governor, so that it is much more accessible. The recording device is, the report says, still considered entirely inadequate for the purpose intended.

AN ENLARGED TIE TAMPING OUTFIT

The Ingersoll-Rand Company, New York, has recently placed a compressor car on the market designed to provide air for four Imperial tie tampers. It is similar in make up and detail to the two-tool car previously introduced, except that it has a 20-hp. engine with a compressor capacity of 88 cu. ft. of free air per minute instead of a 12-hp. engine and a compressor capacity of 45 cu. ft. of free air per minute, provided in the smaller car. The car complete is also about 50 per cent heavier.

The car has a width of 5 ft. 10 in. and a length of 11 ft. 6 in. The direct-connected engine and compressor are housed in a closed box with removable sides, placed in the center of the car and leaving ample platform space on both



Ingersoll-Rand Compressor Car

ends to carry the tools and the crew. The car is self-propelled through the medium of a lever controlled clutch on the engine. Both the engine and the compressor are lubricated automatically by means of a splash system. The compressor is cooled by water from the engine radiator. To facilitate moving the car on or off the track, a set of cross trucks is provided.

Aside from the car, the complete outfit includes four of the pneumatic tie tampers, each fitted with a tamping bar and two 300-ft. hose units. A set of lifting jacks is also furnished to assist in removing the car from the track and replacing it.

FLASHLIGHT SIGNALS IN SWEDEN.—The Swedish State Railways have now the flashlights in all—about 825—distant signals and in over 100 stop signals. About 2,000 flashlights will soon be in operation on these railways.

ANNUAL GOVERNMENT SIGNAL BULLETIN

The Interstate Commerce Commission has issued its annual statistical report of the block and interlocking signals on the railroads of the United States, giving the mileage of road block signaled on January 1, 1916. The comparison with preceding years shows the following totals:

	MILES OF RAILROAD ON WHICH THE BLOCK SYSTEM IS IN USE			
	January 1, 1916	January 1, 1915	January 1, 1914	January 1, 1913
Automatic	30,714	29,600	26,570	22,219
Manual	65,567	66,679	60,167	61,731
Total	96,281	96,279	86,737	83,950

These are the totals after deducting those duplications which appear in the tables because of joint lines of road reported by two different companies. In the great bulk of the items in the mileage tables of this bulletin there is little or no change from the preceding year. Sixty-four roads report the block system in use throughout the whole of their lines, and 16 others report over 95 per cent of their mileage thus operated.

The bulletin contains the following table showing the principal increases and decreases as compared with January 1, 1915:

Names of railroads	Increase		Decrease
	Auto-matic	Nonauto-matic	nonauto-matic
Atlantic Coast Line.....	.....	.....	109.3
Baltimore & Ohio	28.4	.....	.....
Cincinnati, Hamilton & Dayton.....	.....	.....	403.4
Boston & Maine	40.2	.....	.....
*Boyer City, Gaylord & Alpena.....	.....	57.0	.....
Chesapeake & Ohio .....	.....	73.1	.....
Chicago & North Western.....	38.8	.....	.....
Chicago, Burlington & Quincy.....	28.8	.....	37.2
Chicago, Milwaukee & St. Paul.....	122.4	.....	124.3
*Puget Sound & Willapa Harbor.....	.....	65.9	.....
*White Sulphur Sp'gs & Yellowstone Park.....	.....	19.3	.....
Chicago, St. Paul, Minneapolis & Omaha.....	.....	164.9	.....
Chicago, South Bend & Northern Indiana.....	31.9	.....	.....
*Davenport, Rock Island & Northwestern.....	.....	41.7	.....
Delaware & Hudson	22.7	.....	.....
*Duluth & Northeastern.....	.....	60.0	.....
El Paso & Southwestern System.....	28.8	.....	.....
Great Northern .....	.....	.....	31.6
Hocking Valley .....	.....	43.7	.....
Illinois Central	156.9	.....	.....
Yazoo & Mississippi Valley.....	78.5	.....	.....
*Kansas City, Clay County & St. Joseph.....	71.7	.....	.....
Long Island .....	.....	34.2	.....
Louisville & Nashville.....	92.7	.....	21.0
New York Central Lines:			
Cleveland, Cincinnati, Chicago & St. Louis.....	.....	85.8	.....
Toledo & Ohio Central.....	.....	256.4	.....
Zanesville & Western .....	.....	68.4	.....
Norfolk & Western	77.7	.....	77.7
Pere Marquette	30.9	.....	.....
Philadelphia & Reading.....	.....	14.9	.....
St. Louis, Iron Mountain & Southern.....	.....	37.0	.....
Southern	146.4	.....	146.2
Southern Pacific Co.:			
Galveston, Harrisburg & San Antonio.....	.....	.....	231.7
Louisiana Western .....	.....	.....	104.9
Morgan's Louisiana & Texas.....	.....	.....	98.3
Pacific System .....	.....	.....	118.9
Texas & New Orleans.....	.....	.....	78.3
Texas & Pacific .....	.....	78.3	.....
Western Maryland	40.0	47.0	.....
Total	1,028.8	1,147.6	1,582.8

*Roads which have not heretofore reported block-signal mileage.

As in every recent year, the figures showing the increase or decrease in manual block signaling have to be accepted with some qualifications. The increases have been mainly on lines of comparatively light traffic, where the space interval is used only for passenger trains; and the decreases are largely or wholly offset by increases in the automatic columns, automatic signals having been installed on lines formerly worked by manual signals. The total mileage of road signaled, manual and automatic together, shows this year almost no change. The increase in automatic signaling is the significant item and this, since January 1, 1915, amounts to only 1,114 miles, or less than one-third the increase reported the preceding year. The totals are deceptive at best, because of errors and omissions. The Cincinnati, Indianapolis & Western, with 98.9 miles automatic, and 403.4 miles manual, for some reason, not stated, is omitted from the table. The decreases shown in the table against the Southern Pacific lines in Texas must be taken as representing corrections of

errors in former statements, for those roads show, this year, 100 per cent or very nearly 100 per cent, of their lines block signaled.

In table No. 2 the bulletin shows this year 445 miles of road equipped with automatic signal apparatus "not classified"; that is, the signals are neither disk nor semaphore. This mileage is made up largely of trolley roads, and no doubt represents a good deal of apparatus which, under strict definitions, would not be classed as block signals; but there are two prominent items from standard railroads; the Chicago, Milwaukee & St. Paul 36 miles, single track, and the Pennsylvania 20 miles (77 miles of track). These, presumably, represent light signals. Table 2 shows decreases in the 12 months, in the totals, as follows: exposed disks 15 miles of road (257 reduced to 242); enclosed disks 19 miles (1,356 to 1,337); electro-pneumatic semaphores 17 miles (432 to 415), electro-gas 103 miles (891 to 788).

From table No. 4 it appears that the use of the manual block system, on single track, for the purpose only of protecting trains from rear collisions prevails now on only 17,933 miles of road, as compared with 22,974 miles one year earlier. The use of a single block signal opposite the office, to stop trains going either way, now prevails on 49,411 miles of road, or 1,969 more miles than a year before.

The telephone is now used for the transmission of train orders on 99,249 miles of railroad, or 5,782 miles more than on January 1, 1915.

LONG ISLAND APPEALS TO EMPLOYEES

J. A. McCrea, general manager of the Long Island Railroad, has issued to the employees a circular, similar to that of the Pennsylvania, noticed in another column, asking for the names of those who are willing to volunteer their services to assist the company to continue operations regardless of any wage controversy. He says:

"This company employs 7,500 men, of which number 500, or 6.6 per cent of the total, are in the freight train or yard service, which are the two classes of train service for which these demands are being made. To revise the basis of compensation, giving these men the same pay for eight hours that they now get for ten hours, with overtime, will increase the cost of operation of this railroad approximately \$276,000 a year, or 46.7 per cent. Of the 7,500 employees only 1,135 are in the train service. It is not reasonable to expect that the remaining 6,365 employees shall be jeopardized by a strike of less than one-sixth of all the employees. . . . For eighty years this company has served the public. Many of its men have served the company from twenty-five to forty years.

RAILWAY EXTENSIONS IN NYASSALAND.—At a meeting of the Council of the British Cotton Growing Association in Manchester recently, it was stated that with regard to the proposed extension of the Central Africa Railway from Blantyre to the Lake, a petition has been signed by the leading companies interested in the development of Nyassaland and North-Eastern Rhodesia that the line should be extended along what is known as the central route, which would not only pass through the most fertile and most cultivated districts in the Protectorate, but would at the same time offer the most direct line to Lake Nyassa, and would afford the best possible outlet for the Lake traffic and for North-Eastern Rhodesia. The planters in Nyassaland are generally in favor of this route, and the association has decided to support the petition. By the other route, which has been advocated in some quarters, the railway would be extended along the eastern side of Nyassaland, close to the Portuguese border, and although it would be the cheapest line to construct, it would pass through comparatively poor land from an agricultural point of view.

General News Department

At Princeton, N. J., an agent of the Pullman Company has been engaging students and graduates of the University for service as conductors of parlor cars, apparently to fill up the ranks for the summer resort business. It is said that the salary to be paid will be \$77 a month, and that there were a large number of applicants. Those under 25 years of age were not accepted.

"North River Terminal Underground Railroad Company" is the name of a corporation which has filed papers at Albany, with a capital stock of \$100,000, with the announced intention of operating a railroad from the lower end of Manhattan Island beneath the Hudson River to Communipaw, N. J. Communipaw is the terminus of the Central Railroad of New Jersey and the Lehigh Valley.

In a case against the Chicago, Milwaukee & St. Paul the Wisconsin Supreme Court has decided that the work of preparing articles for interstate commerce is not a part of such commerce within the meaning of the federal employers' liability act. In this case John Heiser was killed at Tomah, Wis., when a pile of lumber fell upon him. He was an employee of the railroad and the lumber was used in manufacturing articles used by the road.

The military authorities of the State of Sonora have taken possession of the line of the Southern Pacific Railway in Mexico, and have disconnected the telegraph wires at the United States boundary line. The wires along this road have been seized several times during the past five years. During the unsettled conditions which have prevailed recently, the traffic on this line has required trains only three times a week, and on some sections even less frequently.

June 27 will be James J. Hill memorial day in Spokane, Wash., and in other cities in the northwestern states which the late empire builder aided in developing. In Spokane a memorial meeting under the auspices of the Chamber of Commerce will be participated in by all civic organizations. The Great Northern and all companies serving the Northwest will be asked to halt trains on their lines for five minutes at a designated hour on this day.

In the State of Pennsylvania, where there is a Workmen's Compensation Act, the Pennsylvania Railroad has notified its employees that in cases of bodily injury the company desires that the injured employee be attended, at least during the first 14 days of his disability, by the company's surgeons or at the Altoona hospital (if they live near Altoona and are able to go to the hospital). And the company will pay bills of outside doctors only in emergencies, and then will be responsible only for the cost of the first visit.

Engineers Receive Degrees

The College of Engineering of the University of Illinois, Dr. W. F. M. Goss, dean, at the commencement on June 14, conferred 10 bachelor degrees in railway engineering, 39 in civil engineering, 43 in electrical engineering and 44 in mechanical engineering, in addition to degrees in architecture, mining, etc., 222 in all. In addition there were conferred by the departments of engineering, 21 master's degrees, 21 professional degrees and 3 doctor's degrees.

Railway Earnings and Expenses for April

The net operating income of the railways of the United States for the month of April, according to the monthly bulletin of the Bureau of Railway Economics, covering railroads operating 229,621 miles of road, or 90 per cent of the mileage of the country, increased \$102 per mile or 42.3 per cent, as compared with the same month of 1915. As compared with the average April for the preceding five years, the increase is 52.5 per cent.

The operating revenues in the aggregate amounted to \$280,987,306, an increase of \$50,008,959. Total operating expenses

\$189,923,465, an increase of \$24,928,514. Net operating revenues aggregated \$91,063,841, an increase of \$25,080,445. Taxes paid amounted to \$12,495,265, an increase of \$1,315,922, leaving \$78,507,078 net income available for rentals, interest, improvements and dividends.

Operating revenues per mile averaged \$1,223, an increase of 20.8 per cent. Operating expenses per mile averaged \$827, an increase of 14.3 per cent; net operating revenues \$396, an increase of 37 per cent; net operating increase \$342, an increase of 42.3 per cent. Taxes increased 10.9 per cent.

St. Louis Points With Pride

Not since 1904, the year of the World's Fair commemorating the Louisiana Purchase, were the facilities of Union Station in St. Louis subjected to such a severe strain as they were last week in the handling of the convention rush of delegates and visitors. Every railroad brought in additional sleepers and coaches, and there were ten special trains made up principally of Pullmans. There were 250 additional Pullmans moved in and out of the station. In the storing of cars precaution had to be taken against delays in reassembling the special trains. The New Yorkers and some other eastern delegations wanted to get away as soon as possible after the adjournment of the convention, and requested that cars be made ready on demand. The officers of the terminal watched the convention, and had the forces of all departments, essential to the handling, lined up for quick action; and six special trains, carrying 58 cars, were out of the station and on their way east in less than one hour after Senator Ollie James had finally adjourned the big gathering at the Coliseum. Other specials followed in quick order. The rush was handled without an accident of any kind to mar the record.

Seventeen Passengers Killed at Packard, Iowa

The derailment of a northbound passenger train of the Chicago, Rock Island & Pacific near Packard, Iowa, on the morning of June 2, about three o'clock, briefly reported in the *Railway Age Gazette* of June 9, page 1237, resulted in the death of 17 passengers and the injury of 46 passengers and 3 employees.

The train was the Chicago-Minneapolis express, No. 19, and the cause of the disaster was the weakening of the south abutment of the bridge over Flood creek, about 2 miles south of Packard. The engine, the baggage car and the smoking car passed over the bridge in safety, but the next car, a coach, was overturned, and fell into the creek. Two sleeping cars remained upright, and their passengers suffered only slight injuries.

Most of the fatalities were by drowning.

A worktrain, which had been repairing minor washouts south of Packard, had passed over the bridge about 25 minutes before train 19 reached that point, and nothing wrong was seen at that time. The piers of the bridge and the north abutments remained standing, but the southerly span of the bridge fell into the stream with the coach. All of the cars in the train were of steel, and their bodies were not badly damaged.

Increase in the Work of the Interstate Commerce Commission

In the hearings which were held at Washington by the Senate Committee on Interstate Commerce, in connection with the bill now pending, to increase the membership of the Interstate Commerce Commission from seven members to nine, Commissioner E. E. Clark presented a detailed statement of the work of the commission and of the reasons for enlarging the membership. He said:

"As illustrative of the growth of this character of our work, let us take the year 1906—the year in which the commission was increased from five to seven—and compare it with last year. We had in 1906 on the informal docket 1,002 cases. In 1915 we had 6,385. On the special docket, which we established in 1907, we

had in 1907 761 cases. In 1915 we had 6,670. On the formal docket, in 1906, we disposed of 82 cases. In 1915 we disposed of 1,378—that means cases in which there were contests, full hearings, generally oral arguments and briefs, and printed reports of the commission. In 1910 we were given authority to suspend the proposed increases in rates. In 1910 we had 41 such proceedings, in which we suspended the rates in 25 cases, and declined to suspend them in 16. In 1915 we had 531 such cases. In 1906 the commission took and considered 28,000 pages of testimony, which was, of course, supplemented by exhibits of greater or less volume in different cases. In 1915 we took and considered 202,400 pages of oral testimony."

Explaining the large number of complaints of unjust freight rates brought before the commission, Commissioner Clark said that agencies have been established to buy up paid freight bills, with a power of attorney, and the men who run these agencies are the ones who present the complaints. They have for their compensation a large percentage of whatever sum they may recover. Mr. Clark also showed how the work of the division of valuation, if not carried out with great care and by men thoroughly competent to settle the novel questions which arise, may in large measure be wasted. The commission is already so burdened with work that the examination of innumerable papers has to be delegated to examiners wherever that course is practicable.

International Railroad Master Blacksmiths' Association

The twenty-fourth annual convention of the International Railroad Master Blacksmiths' Association will be held at the Hotel Sherman, Chicago, August 15, 16 and 17, 1916. President T. E. Williams and the chairman of the executive committee, George P. White, have personally looked after the preparations for the meeting. The subjects to be discussed include frame making and repairing, drop forgings, tools and formers, spring making and repairing, shop kinks, and oxyacetylene and electric weldings, etc.

American Railway Tool Foremen

The eighth annual convention of the American Railway Tool Foremen will be held in Chicago at the Hotel Sherman, August 24, 25 and 26. The topics for discussion include heat treatment of steel, special tools for steel car repairs, emery wheels as applied to locomotive repairs and jigs and devices for the enginehouse.

Railroad Trainmen

The Brotherhood of Railroad Trainmen, at the closing session of its convention at Detroit, Mich., chose San Antonio, Tex., for its place of meeting in 1919.

MEETINGS AND CONVENTIONS

The following list gives names of secretaries, date of next or regular meetings and places of meeting of those associations which will meet during the next three months. The full list of meetings and conventions is published only in the first issue of the Railway Age Gazette for each month.

- AMERICAN ASSOCIATION OF DEMURRAGE OFFICERS.—F. A. Pontious, 455 Grand Central Station, Chicago. Next meeting, June 26, 1916, Boston, Mass.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—E. H. Harman, Room 101, Union Station, St. Louis, Mo. Annual meeting, August 16-18, 1916, Memphis, Tenn.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—Owen D. Kinsey, Illinois Central, Chicago. Annual meeting, August 24-26, 1916, Hotel Sherman, Chicago.
- AMERICAN SOCIETY FOR TESTING MATERIALS.—Prof. E. Marburg, University of Pennsylvania, Philadelphia, Pa. Annual meeting, June 27-30, Hotel Traymore, Atlantic City, N. J.
- AMERICAN SOCIETY OF CIVIL ENGINEERS.—Chas. Warren Hunt, 220 W. 57th St., New York. Regular meetings, 1st and 3d Wednesday in month, except July and August, 220 W. 57th St., New York.
- ASSOCIATION OF AMERICAN RAILWAY ACCOUNTING OFFICERS.—E. R. Woodson, Rooms 1116-8 Woodward Bldg., Washington, D. C. Annual meeting, June 28, 1916, Hotel Statler, Detroit, Mich.
- ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—G. P. Conard, 75 Church St., New York. Next meeting, June 27, 28, Boston, Mass.
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—P. C. Jacobs, H. W. Johns-Manville Co., Chicago. Meetings with American Railway Bridge and Building Association.
- CANADIAN RAILWAY CLUB.—James Powell, Grand Trunk, P. O. Box 7, St. Lambert (near Montreal), Que. Regular meetings, 2d Tuesday in month, except June, July and August, Windsor Hotel, Montreal, Que.

- CANADIAN SOCIETY OF CIVIL ENGINEERS.—Clement H. McLeod, 176 Mansfield St., Montreal, Que. Regular meetings, 1st Thursday in October, November, December, February, March and April. Annual meeting, January, Montreal.
- CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 841 Lawlor Ave., Chicago. Regular meetings, 2d Monday in month, except June, July and August, Hotel La Salle, Chicago.
- CENTRAL RAILWAY CLUB.—H. D. Vought, 95 Liberty St., New York. Regular meetings, 2d Friday in January, May, September and November. Annual meeting, 2d Thursday in March, Hotel Statler, Buffalo, N. Y.
- CINCINNATI RAILWAY CLUB.—H. Boutet, Chief Interchange Inspector, Cin'ti Rys., 101 Carew Bldg., Cincinnati. Regular meetings, 2d Tuesday, February, May, September and November, Hotel Sinton, Cincinnati.
- ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—Elmer K. Hiles, 2511 Oliver Bldg., Pittsburgh, Pa. Regular meetings, 1st and 3d Tuesday, Pittsburgh, Pa.
- GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.—A. M. Hunter, 321 Grand Central Station, Chicago. Regular meetings, Wednesday, preceding 3d Thursday in month. Room 1856, Transportation Bldg., Chicago.
- INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—A. L. Woodworth, C. H. & D., Lima, Ohio. Next meeting, August 15-17, 1916, Hotel Sherman, Chicago.
- INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1126 W. Broadway, Winona, Minn. Annual meeting, August 29 to September 1, Hotel Sherman, Chicago.
- MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.—A. P. Dane, B. & M., Reading, Mass. Next annual meeting, September 12-14, 1916, "The Breakers," Atlantic City, N. J.
- NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meeting, 2d Tuesday in month, except June, July, August and September, Boston.
- NEW YORK RAILROAD CLUB.—Harry D. Vought, 95 Liberty St., New York. Regular meeting, 3d Friday in month, except June, July and August, 29 W. 39th St., New York.
- NIAGARA FRONTIER CAR MEN'S ASSOCIATION.—E. N. Frankenberger, 623 Brisbane Bldg., Buffalo, N. Y. Meetings, 3d Wednesday in month, New York Telephone Bldg., Buffalo, N. Y.
- PEORIA ASSOCIATION OF RAILROAD OFFICERS.—M. W. Rotchford, 410 Masonic Temple Bldg., Peoria, Ill. Regular meetings, 3d Thursday in month, Jefferson Hotel, Peoria.
- RAILROAD CLUB OF KANSAS CITY.—Claude Manlove, 1008 Walnut St., Kansas City, Mo. Regular meetings, 3d Saturday in month, Kansas City.
- RAILWAY CLUB OF PITTSBURGH.—J. B. Anderson, Room 207, P. R. R. Sta., Pittsburgh, Pa. Regular meetings, 4th Friday in month, except June, July and August, Monongahela House, Pittsburgh.
- ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—L. C. Ryan, C. & N. W., Sterling, Ill. Next annual convention, September 19-22, 1916, New York.
- RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—J. Scribner, 1063 Monadnock Block, Chicago. Meetings with Association of Railway Electrical Engineers.
- RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 2136 Oliver Bldg., Pittsburgh, Pa. Meetings with Master Car Builders' and Master Mechanics' Associations.
- RAILWAY SIGNAL ASSOCIATION.—C. C. Rosenberg, Myers Bldg., Bethlehem, Pa. Next annual convention, September 12-14, 1916, Grand Hotel, Mackinac Island, Mich.
- RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 50 Church St., New York. Meetings with Association of Railway Telegraph Superintendents.
- RICHMOND RAILROAD CLUB.—F. O. Robinson, C. & O., Richmond, Va. Regular meetings, 2d Monday in month, except June, July and August.
- ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2d Friday in month, except June, July and August, St. Louis.
- SALT LAKE TRANSPORTATION CLUB.—R. E. Rowland, David Keith Bldg., Salt Lake City, Utah. Regular meetings, 1st Saturday of each month, Salt Lake City.
- SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, 3868 Park Ave., New York. Meetings with annual convention Railway Signal Association.
- SOUTHERN & SOUTHWESTERN RAILWAY CLUB.—A. J. Merrill, Grant Bldg., Atlanta, Ga. Regular meetings, 3d Thursday, January, March, May, July, September, November, 10 A. M., Piedmont Hotel, Atlanta.
- TOLEDO TRANSPORTATION CLUB.—Harry S. Fox, Toledo, Ohio. Regular meetings, 1st Saturday in month, Boody House, Toledo.
- TRAFFIC CLUB OF CHICAGO.—W. H. Wharton, La Salle Hotel, Chicago.
- TRAFFIC CLUB OF NEWARK.—Roy S. Bushy, Firemen's Bldg., Newark, N. J. Regular meetings, 1st Monday in month, except July and August, The Washington, 559 Broad St., Newark.
- TRAFFIC CLUB OF NEW YORK.—C. A. Swope, 291 Broadway, New York. Regular meetings, last Tuesday in month, except June, July and August, Waldorf-Astoria Hotel, New York.
- TRAFFIC CLUB OF PITTSBURGH.—D. L. Wells, Gen'l Agt., Erie R. R., 1924 Oliver Bldg., Pittsburgh, Pa. Meetings, bi-monthly, Pittsburgh.
- TRAFFIC CLUB OF ST. LOUIS.—W. S. Crilly, 620 South 7th St., St. Louis, Mo. Annual meeting, December 5, 1916. Noonday meetings, October to May.
- TRANSPORTATION CLUB OF DETROIT.—W. R. Hurley, Superintendent's office, N. Y. C. R. R., Detroit, Mich. Meetings monthly, Normandie Hotel, Detroit.
- TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, N. Y. C. R. R., Cleveland, Ohio. Next meeting, September 5-8, 1916, Hotel Sherman, Chicago.
- UTAH SOCIETY OF ENGINEERS.—Frank W. Moore, 1111 Newhouse Bldg., Salt Lake City, Utah. Regular meetings, 3d Friday in month, except July and August, Salt Lake City.
- WESTERN CANADA RAILWAY CLUB.—L. Kon, Immigration Agent, Grand Trunk Pacific, Winnipeg, Man. Regular meetings, 2d Monday, except June, July and August, Winnipeg.
- WESTERN RAILWAY CLUB.—J. W. Taylor, 1112 Karpen Bldg., Chicago. Regular meetings, 3d Tuesday in month, except June, July and August, Grand Pacific Hotel, Chicago.
- WESTERN SOCIETY OF ENGINEERS.—E. N. Layfield, 1735 Monadnock Block, Chicago. Regular meetings, 1st Monday in month, except January, July and August, Chicago. Extra meetings, except in July and August, generally on other Monday evenings. Annual meeting, 1st Wednesday after 1st Thursday in January, Chicago.

TEN MONTHS OF FISCAL YEAR, 1916—CONTINUED FROM LAST WEEK											
Name of road.	Average mileage operated during period.	Operating revenues.			Operating expenses.			Net from way and structures.	Increase (or decr.) comp. with last year.		
		Freight.	Passenger.	Total (inc. misc.).	Traffic.	Transportation.	Miscellaneous.				
General.											
Miscellaneous.											
Total.											
Railway tax accretions.											
Operating income (or loss).											
Increase (or decr.) comp. with last year.											
Chicago, Indianapolis & Louisville.....	622	4,302,751	1,528,090	6,321,095	674,091	1,031,078	197,894	2,107,623	291,096	1,814,419	546,364
Chicago, Milwaukee & St. Paul.....	10,210	63,086,750	15,122,991	87,372,275	2,040,459	1,357,335	1,526,163	31,452,975	4,384,334	27,068,641	137,709
Chicago, Peoria & St. Louis.....	255	1,915,608	523,983	2,651,423	407,818	332,445	56,224	268,851	49,503	219,154	6,899,452
Chicago, Rock Island & Gulf.....	477	1,915,608	523,983	2,651,423	407,818	332,445	56,224	268,851	49,503	219,154	89,778
Chicago, Rock Island & Pacific.....	7,559	40,586,814	15,073,295	60,227,580	845,204	1,046,891	1,365,839	16,083,520	2,956,886	13,126,634	111,410
Chicago, St. Paul, Minneapolis & Omaha.....	1,253	10,858,532	4,289,986	16,327,888	1,820,921	2,049,072	293,814	5,569,729	853,079	4,716,650	617,070
Chicago, Terre Haute & Southern.....	622	1,927,105	163,638	2,145,258	280,824	461,637	39,364	1,757,424	107,133	1,650,291	1,073,208
Cincinnati, Hamilton & Dayton.....	322	6,665,925	1,132,211	8,695,069	1,406,856	1,786,807	162,465	1,996,677	317,001	1,679,676	158,808
Cincinnati, Indianapolis & Western.....	322	6,665,925	1,132,211	8,695,069	1,406,856	1,786,807	162,465	1,996,677	317,001	1,679,676	158,808
Cincinnati, New Orleans & Texas Pacific.....	337	7,052,498	1,482,448	9,060,946	913,058	2,193,556	249,255	2,653,178	316,000	2,471,929	687,229
Cincinnati, Northern.....	246	1,263,140	175,021	1,498,882	245,951	244,814	28,025	479,363	56,371	414,345	126,874
Cleveland, Cincinnati, Chic. & St. Louis.....	2,385	25,299,195	7,419,237	35,805,357	3,688,972	6,689,168	762,718	12,014,963	117,835	10,941,668	4,307,572
Cleveland, Midland.....	338	1,029,440	1,48,263	1,284,484	205,810	310,503	71,374	344,853	86,362	258,491	85,464
Colorado & Southern.....	1,102	5,592,450	1,132,185	7,228,163	900,566	1,409,226	98,718	2,028,085	2,252,658	2,175,944	649,243
Colorado & Southern.....	1,102	5,592,450	1,132,185	7,228,163	900,566	1,409,226	98,718	2,028,085	2,252,658	2,175,944	649,243
Cripple Creek & Colorado Springs.....	87	960,929	205,118	1,185,092	141,249	129,526	35,808	287,435	54,084	502,652	647,796
Cumberland Valley.....	164	2,227,087	545,993	2,910,756	278,300	279,573	9,165	858,872	1,362,154	1,303,408	7,495,485
Cumbarland & Hudson Co.—R. R. Dept.....	985	17,867,381	2,397,529	21,437,096	1,755,848	3,861,260	261,813	7,147,872	80,221	7,067,651	3,416,533
Delaware, Lackawanna & Western.....	955	29,530,999	7,002,155	40,458,656	3,509,681	5,946,404	727,407	12,822,420	303,582	12,518,838	2,234,638
Delaware, Lackawanna & Western.....	955	29,530,999	7,002,155	40,458,656	3,509,681	5,946,404	727,407	12,822,420	303,582	12,518,838	2,234,638
Delaware, Rio Grande.....	2,566	15,205,792	4,081,197	20,783,721	2,093,147	3,474,262	400,254	5,533,432	365,968	5,067,464	—9,887
Denver & Salt Lake.....	255	1,245,508	262,219	1,580,699	189,116	317,577	18,796	568,373	48,612	517,000	30,210
Denver & Salt Lake.....	255	1,245,508	262,219	1,580,699	189,116	317,577	18,796	568,373	48,612	517,000	30,210
Detroit & Mackinac.....	393	633,033	258,394	958,955	103,171	165,729	20,728	330,387	26,537	303,850	205,349
Detroit & Toledo Shore Line.....	81	1,435,934	481,439	2,614,423	255,803	347,844	5,555	1,230,981	43,497	1,187,484	66,432
Detroit, Grand Haven & Milwaukee.....	191	1,813,001	481,439	2,614,423	255,803	347,844	5,555	1,230,981	43,497	1,187,484	66,432
Detroit, Toledo & Ironton.....	441	1,557,764	206,324	4,528,113	535,952	715,487	13,715	1,155,919	62,110	1,093,809	486,429
Duluth & Iron Range.....	288	4,169,479	206,324	4,528,113	535,952	715,487	13,715	1,155,919	62,110	1,093,809	486,429
Duluth, Missabe & Northern.....	328	7,118,275	272,726	7,390,052	494,814	1,072,518	24,679	1,378,839	57,700	1,321,139	3,689,727
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456	918,127	630,785
Duluth, St. Paul & Northern.....	628	1,895,129	718,154	2,852,004	439,205	3,040,266	72,851	1,010,583	92,456		

†Figures shown are for five months ended April 30, 1916.

REVENUES AND EXPENSES OF RAILWAYS

TEN MONTHS OF FISCAL YEAR, 1916—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decr.) comp. with last year.		
		Freight.	Passenger.	Total.	Miscellaneous.	Trans- portation.	Traffic.						
Mobile & Ohio	1,122	8,211,099	1,017,582	9,228,681	2,072,173	355,806	3,393,431	23,461	312,029	7,132,272	329,713	2,298,616	181,624
Monongahela	108	1,472,786	57,224	1,535,579	198,494	8,710	330,271	.....	34,734	704,067	50,855	798,657	.....
Morgan's L. & Texas R. & S. Co.	405	2,661,046	833,873	3,495,919	638,019	118,350	1,844,884	22,829	115,858	2,819,493	218,663	775,716	71,248
Nashville, Chattanooga & St. Louis	1,231	7,992,427	2,217,719	10,210,146	1,217,109	500,262	3,717,617	101,509	362,494	7,878,823	2,681,413	2,415,767	1,192,203
Nevada Northern	165	1,362,776	110,839	1,473,615	173,687	6,369	281,321	781	46,291	67,854	68,217	799,599	499,612
New Orleans & North Eastern	203	2,324,473	495,885	2,820,358	345,160	560,814	958,693	57,995	123,105	2,141,143	996,172	845,974	312,727
New Orleans Great Northern	285	1,098,601	265,878	1,364,479	186,286	26,101	418,295	1,763	62,658	916,096	600,398	566,106	148,216
New Orleans, Mobile & Chicago	462	1,355,899	240,882	1,596,781	232,668	42,265	527,465	—68	69,005	1,147,822	527,483	458,985	148,985
New Orleans, Texas & Mexico	285	1,103,221	229,342	1,332,563	265,817	223,257	402,94	483,988	96,128	1,109,486	300,113	15,032	284,530
New York Central Railroad	6,093	107,734,533	39,694,332	147,428,865	29,780,713	2,379,163	53,640,509	2,313,520	3,696,390	108,479,478	62,492,861	7,732,308	55,103,126
New York, Chicago & St. Louis	569	10,325,949	1,099,963	11,425,912	876,912	446,995	4,655,811	38,221	214,951	8,239,122	3,634,585	413,440	1,752,163
New York, New Haven & Hartford	2,005	30,598,600	24,443,865	55,042,465	7,221,832	365,538	23,250,574	673,002	1,453,654	41,911,520	20,453,576	2,409,000	18,039,813
New York, Ontario & Western	568	5,067,426	1,361,810	6,429,236	902,206	75,046	2,907,066	.....	161,261	5,278,802	2,125,220	2,001,674	2,217,037
New York, Philadelphia & Norfolk	112	3,175,055	365,377	3,540,432	333,235	48,153	1,412,543	40,127	110,987	2,678,532	1,122,542	1,013,259	534,742
New York, Susquehanna & Western	140	2,157,955	518,329	2,676,284	218,869	18,909	1,409,956	.....	58,395	2,122,562	974,636	840,377	85,648
Norfolk & Western	2,086	40,582,778	8,486,779	49,069,557	5,355,068	571,608	11,696,712	86,953	734,514	26,539,172	20,483,988	1,715,000	18,766,017
Norfolk Southern	908	2,674,319	882,984	3,557,303	456,129	75,052	1,293,413	1,026	175,517	2,547,073	1,246,371	1,118,301	444,488
Norfolk Western	6,510	40,096,204	11,360,217	51,456,421	6,877,147	943,307	17,394,743	81,061	934,727	37,210,815	30,030,683	4,027,793	25,998,525
Northwestern Pacific	507	1,403,395	1,686,315	3,089,710	556,025	51,891	1,195,298	2,334	79,331	2,289,485	1,189,632	170,917	1,018,307
Oahu Railway & Land Co.	114	773,871	210,773	984,644	83,159	7,018	239,150	.....	51,904	481,016	158,619	490,904	16,646
Oregon Short Line	2,259	15,357,402	3,908,365	19,265,767	2,438,638	347,731	4,650,463	299,075	532,805	10,707,860	1,153,862	8,700,704	2,874,986
Oregon-Washington R. R. & Nav. Co.	2,053	9,443,197	3,631,697	13,074,894	2,301,333	342,911	4,444,866	168,246	610,514	9,646,538	1,004,903	3,636,057	54,316
Panhandle & Santa Fe	670	3,488,665	814,570	4,303,235	823,466	668,562	42,102	1,070,432	.....	107,708	2,707,695	120,040	1,679,033
Pennsylvania Company	1,758	43,153,678	9,073,139	52,226,817	7,339,576	774,072	18,443,925	322,311	1,294,004	39,639,626	19,787,573	2,823,688	16,961,418
Pennsylvania Railroad	4,541	130,776,674	34,394,138	165,170,812	22,493,761	34,689,792	1,946,715	62,387,592	2,357,358	4,292,434	128,167,668	6,476,046	46,230,385
Pere Marquette	2,247	12,553,490	3,452,827	16,006,317	1,482,639	308,416	6,064,545	39,655	410,424	11,841,882	5,766,726	5,228,335	1,597,396
Philadelphia & Reading	1,120	39,705,708	5,753,610	45,459,318	3,266,433	465,787	15,274,285	128,656	771,322	27,745,339	1,002,813	18,841,828	7,105,041
Philadelphia, Baltimore & Washington	717	9,925,373	7,601,947	17,527,320	2,603,057	263,845	7,338,802	1,020	503,836	14,130,639	5,043,316	4,651,795	2,199,415
Pittsburgh & Lake Erie	2,255	16,129,347	1,855,330	18,004,677	2,422,564	134,622	3,949,113	34,219	292,334	8,427,501	10,227,830	9,696,065	6,228,217
Pittsburgh, Cincinnati, Chic. & St. Louis	1,489	27,360,335	7,310,102	34,670,437	5,399,073	651,153	13,159,744	261,118	920,050	27,670,745	1,677,233	9,597,130	3,497,988
Pittsburgh, Shawmut & Northern	294	1,887,545	94,359	1,981,904	292,869	489,746	612,273	.....	47,282	1,458,029	551,263	18,718	532,545
Pt. Reading	21	1,338,019	1,525,825	2,863,844	119,744	384	656,436	.....	1,867	858,270	667,555	100,000	567,555
Richmond, Fredericksburg & Potomac	88	1,372,726	934,374	2,307,100	198,109	300,048	34,815	866,529	36,272	75,995	1,159,801	85,336	1,074,200
Riudand	468	1,777,554	1,013,853	2,791,407	376,630	90,550	1,112,232	10,358	60,382	2,767,875	1,005,498	170,646	258,263
St. Joseph & Grand Island	258	1,151,739	259,209	1,410,948	224,950	43,869	502,882	461	55,383	1,128,154	370,253	288,317	91,344
St. Louis & San Francisco	4,750	26,583,836	9,102,315	35,486,151	5,745,329	652,510	12,111,809	.....	984,283	25,304,123	12,844,746	1,746,697	11,081,395
St. Louis, San Francisco & Texas	243	616,165	232,739	848,904	123,975	20,592	423,689	.....	44,979	864,104	74,707	56,472	128,356
St. Louis, Brownsville & Mexico	548	1,378,416	676,727	2,055,143	389,403	56,974	728,255	.....	103,604	1,556,784	618,997	87,389	528,038
St. Louis, Iron Mountain & Southern	3,555	20,308,918	4,978,407	25,287,325	3,695,943	627,809	7,752,493	86,461	611,059	18,963,696	8,164,948	6,995,607	366,995
St. Louis, Merchant's Bridge Terminal	94	5,218,498	1,099,964	6,318,462	250,135	7,944	840,474	.....	65,788	1,253,822	623,995	537,587	187,993
St. Louis Southwestern	9	2,512,757	760,038	3,272,795	612,678	289,755	1,641,054	31,559	252,270	3,791,644	2,935,116	298,888	2,633,990
St. Louis Southwestern of Texas	810	2,512,757	760,038	3,272,795	612,678	289,755	1,641,054	31,559	252,270	3,791,644	2,935,116	298,888	2,633,990
San Antonio & Aransas Pass	724	2,290,938	802,366	3,093,304	673,518	66,157	1,468,636	.....	122,216	2,874,344	397,191	181,588	218,833
San Antonio & San Pedro	1,154	5,651,368	2,592,043	8,243,411	1,371,705	325,631	2,624,837	220,609	176,505	5,524,423	3,612,424	408,388	3,131,020
Seaboard	3,449	7,816,469	2,370,673	10,187,142	1,528,434	349,876	3,700,504	220,609	316,792	7,234,484	410,609	496,308	950,543
Southern	7,022	39,104,398	13,738,062	52,842,390	9,171,523	1,591,765	19,041,274	323,935	1,692,213	38,315,672	2,405,659	17,315,927	6,392,843
Southern Pacific	6,952	59,219,522	27,460,733	86,680,255	10,695,541	1,808,497	29,332,954	1,740,745	2,320,891	59,525,284	3,604,356	4,179,215	6,746,368
Spokane, Portland & Seattle	555	2,469,238	1,212,247	3,681,485	448,977	79,644	932,534	35,763	24,831	2,019,225	542,090	1,537,942	385,787
Staten Island Rapid Transit Co.	11	469,338	254,252	723,590	60,685	7,187	432,129	.....	24,831	616,225	401,701	51,500	35,087
Tennessee Central	294	936,133	310,704	1,246,837	187,834	57,360	492,461	.....	66,820	1,070,963	254,095	206,470	90,185
Terminal Railroad Ass'n of St. Louis	37	2,498,092	874,989	3,373,081	149,797	9,026	833,284	.....	47,771	1,334,878	1,242,860	972,663	162,711
Texas & New Orleans	1,944	11,450,501	3,587,023	15,037,524	2,480,919	378,186	1,252,193	99,661	100,402	2,556,072	202,567	579,663	428,930
Texas & Pacific	436	3,659,374	495,771	4,155,145	1,803,766	378,186	6,277,340	137,286	510,289	11,570,929	4,694,019	776,438	790,766
Toledo & Ohio Central	248	576,279	376,248	952,527	543,778	70,239	1,563,275	17,612	98,243	3,225,106	239,688	945,546	236,375
Toledo, Peoria & Western	451	4,043,601	309,905	4,353,506	154,504	22,662	375,557	.....	37,220	883,769	61,000	72,406	76,216
Toledo, St. Louis & Western	129	429,333	248,248	677,581	547,948	161,794							

Traffic News

The Chicago, Milwaukee & St. Paul and the Chicago & North Western have acceded to the demands of the Sioux City (Iowa) live stock exchange and the stockyards company for a reduction of rates on all cattle shipments from South Dakota, Montana and North Dakota to the Sioux City market and on all classes of live stock from Sioux City to points east of Chicago. The new tariff will place Sioux City on a parity with St. Paul and Omaha.

The Brooklyn (N. Y.) Eagle prints a picture of a flag pole, lying on a dock in that city, which is 165 ft. long, and on which there was a freight bill of \$1,550 for transportation from the Pacific Coast. It was carried on a string of 45 ft. platform cars, four of them. From the dock in Hoboken, across New York harbor to Brooklyn, the pole was floated; and in the same way a tug will tow it to Northport, Long Island, where it is to be set up on the estate of Joseph T. Lilly. The pole is 28 in. in diameter at the butt and 8 in. at the smaller end. It was cut from an Oregon fir tree, which stood more than 300 ft. high. It is proposed to mount on the pole a flag 30 ft. x 50 ft.

An advance of from \$2 to \$4 on regular one-way passenger fares between Chicago and practically all points west of the Missouri river went into effect on June 15. From Chicago to Omaha, Kansas City and St. Paul the increase in rates will average \$1.25, the rate from Chicago to Omaha advancing from \$9.75 to \$10.85. The first class fare from Chicago to Denver was raised from \$22.71 to \$26.02. From Chicago to San Francisco and all California points the first class fare was raised from \$59.75 to \$60.85 and the second class from \$49.75 to \$53.35. The first class fare from Chicago to Portland, Seattle and all north coast points was advanced about four dollars. The new rates will not affect summer tourist rates now in force.

It is understood that the Southern Pacific, the Atchison, Topeka & Santa Fe and the Ray & Gila Valley (6 miles long) will contest in Federal court the recent order of the Arizona Corporation Commission, to take effect August 1, reducing the passenger fares on these lines to three cents a mile. The first legislature after Arizona became a state enacted a three-cent fare law. The railroads invoked the referendum against it, but it was ratified by a majority vote of the people. The carriers then attacked the law in the courts on the ground that the constitution lodged with the Corporation Commission the exclusive authority to fix passenger fares. The Supreme Court upheld the contention of the railroads. Since then the Corporation Commission has been besieged to order a reduction of the fares, and its first step in this direction has just been taken. Some of the short lines of Arizona charge as high as 10 cents a mile. The Corporation Commission has authorized the Arizona Eastern to charge four cents a mile on the Globe and Cochise divisions, and 3½ on the Maricopa & Phoenix and the Phoenix & Eastern. The existing rates on the main lines of the Southern Pacific and the Atchison, Topeka & Santa Fe are four cents a mile.

Traffic Club of Pittsburgh

The Traffic Club of Pittsburgh has elected the following officers: President, Edwin F. Austin, division freight agent, Pittsburgh, Cincinnati, Chicago & St. Louis; first vice-president, Glenn A. Aiken, traffic manager, American Bolt & Nut Fastener Co.; second vice-president, James C. McKalit, auditor, Pittsburgh & Lake Erie; third vice-president, Albert C. Graham, traffic manager, Youngstown Sheet & Tube Co., Youngstown, O.; secretary, Almer H. Orr, agent, Atlantic Coast Dispatch; treasurer, William S. Morris, Jr., freight agent, Crucible Steel Co. of America. Board of directors: Charles H. Barnhart, traffic manager, Babcock Lumber Co.; James M. Breen, general agent, Big Four; J. F. Constance, general agent, C. C. C. & St. L.; Irving W. Potter, traffic manager, Aluminum Co. of America; Lorens H. Turner, superintendent motive power, Pittsburgh & Lake Erie.

Commission and Court News

INTERSTATE COMMERCE COMMISSION

Tariffs making increases in the charges for storage on freight held in cars, or in freight houses, at New York City and vicinity, filed by the railways last winter, and suspended until June 20, have been again suspended until December 20 next.

Kansas Salt Rates Reduced

Swift & Company v. Union Pacific et al. Opinion by Commissioner Hall:

A rate of 27½ cents per 100 lb. on bulk salt in carloads from Kansas producing points to Fort Worth and North Fort Worth, Tex., found to be unreasonable; a maximum rate of 17 cents is prescribed for the future. (39 I. C. C., 665.)

Coal to Missouri Stations

Investigation and Suspension Docket No. 740. Opinion by the Commission:

Proposed increased rates on bituminous coal in carloads from mines on the Southern Railway in Illinois and Indiana to stations on the Chicago & Alton Railroad in Missouri have not been justified, and schedules under suspension are ordered canceled. (39 I. C. C. 520.)

Cottonseed Oil and Cake from Oklahoma

Oklahoma Cottonseed Crushers' Association v. Missouri, Kansas & Texas et al.; and same v. Atchison, Topeka & Santa Fe et al. Opinion by Chairman Meyer:

This is a supplemental report, confirming findings in original report, 35 I. C. C., 94, that the rates on cottonseed oil from Oklahoma producing points to Kansas City, Mo., and on cottonseed cake, meal and hulls from the same producing points to points in other states are unjust, unreasonable and unjustly discriminatory. Maximum rates proposed therein are revised. (39 I. C. C., 497.)

Tie Rates Same as Lumber

Bowie Lumber Co. v. Morgan's Louisiana & Texas et al. Opinion by the commission:

Defendants' rate on hewn cypress crossties in carloads from Bowie, La., to Eureka, Tex., is found to be unreasonable to the extent that it exceeds the rate contemporaneously maintained on cypress lumber. Defendants are required to maintain a rate on ties not in excess of the rate on lumber. The commission has repeatedly held that the rates on crossties between given points should not exceed the rates contemporaneously in effect on lumber of the kind of wood from which the crossties are made, and no specific testimony was offered to support the allegation of unjust discrimination. (39 I. C. C., 609.)

Sundry Coal and Coke Rates

Stonega Coke & Coal Co. v. Louisville & Nashville et al.; also Investigation and Suspension Docket Nos. 71, 321, 625 and 633; coal and coke rates. Opinion by Commissioner McChord:

Reasonable divisions to the Interstate Railroad out of the through rates involved are fixed at 15 cents per ton on coal and 18 cents per ton on coke.

The provision of section 16-A of the act regarding the rehearing of cases by the Commission does not contemplate that the rehearing be completed and a supplemental report and order made before expiration of original order.

Exhibits compiled by Commission's examiners of accounts, offered in evidence at a duly appointed hearing, without objection from interested parties, properly identified by the official stenographer and filed in the record along with all the other evidence in the case, are lawfully a part of the record. Rates fixed under federal authority must yield "just compensation," which comprehends a reasonable return upon the value of property devoted to public use.

Where the traffic involved is only a portion of the traffic moving over the originating division, and only a small portion of the coal and coke traffic moving over the line, which, in turn, is only a small part of the entire coal and coke tonnage moving over the entire system, a claim that the rates on the traffic involved are confiscatory is not established until it be shown that the rates on the other traffic moving over the originating line are reasonably remunerative and that the revenue derived from the other coal and coke traffic moving over the line is adequate.

Commercial competition is a controlling factor in the adjustment of the rates here considered.

Reasonable rates on coal from St. Charles and Appalachia are found to be such as do not exceed the rates contemporaneously in effect from Middlesboro-Jellico to the same destinations by more than the differential now fixed. Reasonable coke rates for the future will be such as do not exceed \$2.50 per ton to Chicago with proportionately scaled rates to other destinations involved.

St. Charles is included in Appalachia group and a differential from this group of 15 cents per ton over Middlesboro-Jellico rates on coal is fixed. *Coal Rates from Virginia Mines*, 30 I. C. C. 635, modified.

The Appalachia group rate is to be applied from operations on the Interstate Railroad.

This report is made on a rehearing in Docket 3771, had for the purpose of fixing divisions between the complainant Interstate Railroad and the defendant Louisville & Nashville; on the rehearing of Investigation and Suspension Dockets Nos. 71 and 321; and on the original hearing of Investigation and Suspension Dockets No. 625 and No. 633. Because all the cases involve the adjustment of coal and coke rates from the St. Charles and Appalachia districts in Virginia, to points on and north of the Ohio River and points in Kentucky and Tennessee, they are considered in one report. (39 I. C. C. 523.)

Charge for Empty Cars Unlawful

City Ice Delivery Company v. Pere Marquette et al. Opinion by the commission:

A charge of \$6 per car for the transportation of empty refrigerator cars from Toledo to Rose Center, Mich., for return loading with ice found to have been assessed without lawful tariff authority. Refund directed. The commission condemns the tariff rule providing a mileage charge for the transportation of empty refrigerator cars from the point at which such cars are available to the point at which they are to be loaded with ice for ensuing interstate movement. A higher charge for the transportation of ice in refrigerator cars than for its transportation in ordinary cars is declared to be proper. (39 I. C. C., 589.)

Grain Transit Rules at Buffalo, N. Y.

Investigation and Suspension Docket No. 761. Opinion by Chairman Meyer:

Proposed cancellations of transit regulations at Buffalo, Toledo, Detroit and other points, on grain from certain Western connections are found not to have been justified.

The New York Central lines, respondents in this proceeding, proposed to cancel these transit regulations for "stopping for inspection, weighing, transfer, cleaning, storing, mixing, or change of ownership, or consignee, or destination," as regards traffic received from the Chicago & Alton; Pennsylvania Company; Pittsburgh, Cincinnati, Chicago & St. Louis; Toledo, Peoria & Western; Vandalia; Chicago & Eastern Illinois; Chicago, Rock Island & Pacific; and Cincinnati, New Orleans & Texas Pacific. The Toledo Produce Exchange, the Illinois Grain Dealers' Association and others protested.

The New York Central is willing to restore transit on grain originating on the Chicago & Alton. The Michigan Central did not attempt to justify cancellations of transit on grain from the Chicago & Alton, Chicago & Eastern Illinois, or the Chicago, Rock Island & Pacific.

Under the regulations sought to be canceled grain moves to the transit point under local rates. When an outbound shipment is made the freight charges are adjusted to the basis of the joint through rate, origin to final destination. The effect of the suspended tariffs, if they are permitted to become effective, will be that grain shipped to a transit point and later reshipped thence will pay the combination of the local rate to the transit point and the local rate beyond, instead of the joint through

rate from point of origin to ultimate destination. To points shown in an exhibit filed by one of the protestants the resultant increases are from 4.2 to 7.8 cents per 100 pounds. The suspended tariffs change no existing joint rates on through movements.

The excepted originating lines refused after transit had been accorded grain shipped from stations on their lines to accept corrections of their earnings to the basis of the divisions applicable under joint rates, and this refusal caused respondents to cancel the transit regulations. Respondents are willing to restore the transit herein involved, if the carriers from which the grain is received will accept an adjustment of their charges on the basis of the divisions of the joint rates.

The tariffs naming both the local and joint rates of the originating carriers contain a general rule to the effect that freight transported under them will be subject to the current rules and regulations of participating lines while in their possession, in regard to reconsignment, storage, terminal service, weighing, and other services, and also in regard to all other rules and regulations that may in any wise change, affect, or determine any part or the aggregate of the rates named in such tariffs, etc. Interpreting this provision, the Pittsburgh, Cincinnati, Chicago & St. Louis made it plain that if the New York Central desired to give transit on grain originating on the P. C. C. & St. L. the former must stand the shrinkage from its revenue or cancel the transit arrangement. Plainly, as the existing joint rates are not shown to be other than just and reasonable, and as the rates resulting from the cancellation of the transit regulations are not sought to be justified when applied to reconsigned grain, the disagreement as to divisions must not cast unjustified increased charges on the shippers. The proposed increased charges have not been justified, and an order will be entered requiring the cancellation of the suspended tariffs.

If the interested carriers are still unable to reach an agreement upon divisions of the existing joint rates the Commission will, upon notification to that effect, arrange for further hearing and prescribe the divisions. (39 I. C. C. 580.)

Average Demurrage Agreement Applies to Trap Cars

Woolson Spice Company v. Pennsylvania Company et al. Opinion by the Commission:

Defendants' refusal to include trap cars used by complainant within the terms of the so-called average agreement is found to be without lawful tariff authority. Reparation awarded.

Complainant is engaged in the coffee and spice business at Toledo, Ohio. By complaint, filed April 17, 1915, it alleges that defendants' refusal since December, 1912, to include trap cars within the terms of the so-called average agreement respecting car demurrage was and is unreasonable and also unauthorized by tariffs lawfully on file.

An informal complaint was presented on November 24, 1913, without reference to specific cars. All claims that accrued more than two years prior to April 17, 1915, are barred by the statute of limitation.

Complainant uses trap cars for the transportation of l. c. l. freight from its plant on the Manufacturers Railway in Toledo to the Pennsylvania Company's freight houses, to connecting lines' transfer stations, and to final destinations. It receives few inbound trap cars. For a period of two years prior to the date of the filing of the complaint, rules governing the use of trap cars were carried in separate trap-car tariffs practically without change during the entire period, and during the same period complainant and defendants were parties under proper tariff authority to various average agreements, all of which were identical, however, with respect to the kind of cars to which the agreements applied.

Rule 6 of the current trap-car tariff requires cars to be loaded and unloaded promptly, and "if detained they will be subject to the established rules governing demurrage charges. . . ." These rules provide for the assessment of demurrage under the so-called average plan.

Defendants contend that the provisions of the demurrage tariffs are not applicable until a trap car has been detained beyond the free time allowed, with the result that while the detention of such a car beyond the free time is followed by the assessment of demurrage charges, its release within the first 24 hours can not entitle the consignor or consignee to a credit under the average agreement. But we can not agree with this

contention. The meaning of a tariff is to be gathered from a reasonable construction of the terms employed in it and is not affected by the unexpressed intentions of its framers. Where the average plan is operative the words "if detained" can not mean "if detained beyond 48 hours," which is what defendants' contention comes to. They contemplate any detention, no matter of how short duration. The effect of the rules quoted is to bring trap cars fully and completely within the terms of defendants' demurrage tariffs.

Defendants further contend that the demurrage rules themselves exclude trap cars, because they apply only to cars used in the transportation of carload freight. But both the demurrage rules and the rules setting forth the average plan refer to "cars" without limitation or modification, and nowhere state that their provisions are restricted to cars used in the transportation of carload freight. Trap cars are not referred to specifically either by way of inclusion or exclusion. It may reasonably be inferred that the demurrage rules apply on the car and not on the contents thereof, and it is immaterial whether the car contains or is to contain carload or less-than-carload freight, provided it be placed for loading by the consignor or for unloading by the consignee, as the case may be. It necessarily follows that so far as the provisions of the demurrage tariffs are concerned, they apply in their entirety to all cars, unless specifically excepted, without reference to the quantity or kind of freight contained in them.

Complainant is held to have been damaged to the extent that the charges exceeded those which would have accrued if trap cars had been specifically included in the average agreement, and to be entitled to reparation with interest.

Commissioner Harlan dissents. (39 I. C. C. 583.)

STATE COMMISSIONS

The Public Utilities Commission of Colorado, in an order dated June 15, has directed the Atchison, Topeka & Santa Fe, and the Denver & Rio Grande, to install automatic signals at the twenty highway crossings on their lines between Denver and Pueblo; at each crossing of the railway with the "state primary highways" numbers 3, 4 and 8. The commission, in its report, says that heretofore the officers of the railways have been discouraged because the public did not appreciate the usefulness of crossing signals; but there has been an improvement, and the traveling public is now co-operating with the carriers; a large majority of drivers of vehicles stop when they see a "wigwag" signal begin to move, and await the passing of the approaching train. Heretofore the commission has ordered the installation of electric bells at crossings, but it is now of the opinion that where traffic is heavy there should be both an audible and a visual warning. The visual warning (the "wigwag") is especially useful at night, and whenever a traveler is unable to hear the bell. The new signals must be installed within 60 days, and must be of a design approved by the commission.

New York Central Fare Advances Disapproved

The New York State Public Service Commission, Second district, in an opinion by Commissioner James O. Carr, has refused to approve the tariffs filed by the New York Central last December, increasing certain local passenger fares on that road, so as to make a uniform basis of 2½ cents a mile throughout the company's lines. The tariffs, which the company proposed to put in effect January 1, 1916, would have caused some reductions in rates, but the commission finds that the great majority of the changes would be increases. Commissioner Emmet dissents from the decision, holding that the new rate should have been allowed in order to provide greater uniformity.

The commission holds that the need for the increases affecting the Hudson division is clearly unproved, and that on other divisions there are discriminations in the present rates, which the proposed tariffs do not satisfactorily remedy. While it is possible that on some of the minor divisions of the road passenger traffic does not pay, there is no just reason why this burden should be imposed through generally increased rates on the patrons of the main line, where passenger business seems on the record to be clearly profitable.

The commission unanimously declined to permit the proposed increase between Albany and Troy, six miles, on the grounds that, while it has been shown that the revenue from the operation

of belt line trains is less than the cost of operation, the railroad does not take into consideration the fact that the belt line is a part of its general system, and that to it is chargeable a proportion of revenues and expenses of through trains operating over this particular stretch.

In discussing the effort of the railroad to prove that it needs additional revenue from passenger business, the report says that in view of the fact that the road earned in 1915 above all charges, 11.11 per cent on its capital stock, such increased revenue is clearly not needed on the railroad's operation as a whole. It is also clearly not proved to be needed on intrastate passenger business. In reaching this conclusion, Commissioner Carr says that, in determining the cost of intrastate passenger business, the railroad should have charged to interstate passenger business from 29 to 31 per cent of the total of passenger operating costs within the state, instead of 6 per cent; this position being taken because the railroad's 6 per cent allocation depended on the proportion of interstate to intrastate passengers carried; the higher percentage which the commission determines to be correct being based on the proportion of interstate to intrastate passenger miles within the state.

The railroad contended that no portion of fares received from interstate passengers should be credited to intrastate revenue for the portion of the interstate journey within the State of New York. Commissioner Carr says that a proportion of these fares must be credited to intrastate revenues, and that when they are so credited the intrastate revenues are increased by 50 per cent.

Speaking of the railroad's contention that, inasmuch as the Interstate Commerce Commission has permitted roads competing with the New York Central to increase their rates to a two-and-a-half-cent-per-mile basis, Commissioner Carr says:

"We do not understand that it is our province to approve increased fares merely for the purpose of making the rates of all carriers equal or even substantially uniform. To justify approval of the proposed increases there must be established the necessity for additional revenue in order to enable the company to earn a fair return upon its investment.

"The only real contention for the increased rates is the claim that the Interstate Commerce Commission and the United States Supreme Court have decided that each class of service should stand by itself, and therefore, inasmuch as the passenger business is not earning as large a return as the freight business, the passenger fares ought to be increased."

It is recognized that payments for interest, taxes, steel cars, heavier motive power and rails, block signals and labor have increased during the last few years, but "the commission is not in a position to know just how these advances will affect the New York Central" and the commission cannot grant an increase for this reason alone.

"The question of wages which confronts the railroads is a serious one, and there must be a certain point beyond which the demands for increased wages must cease, because, if granted, the result may be equivalent to a confiscation of the property. Wages cannot be steadily increased unless additional earnings are obtained which will provide therefor, and there is a limit beyond which the patient and long-suffering public will probably be disinclined to go."

Chairman Van Santvoord filed with the order an opinion taking issue with Mr. Emmet on the points over which Mr. Emmet dissents. Mr. Van Santvoord holds that the Public Service Commission has the power to make rates irrespective of special or general legislative enactments thereon.

UNITED STATES SUPREME COURT

Defense of Confiscatory Rates Held Barred In Missouri Excess Fares Cases by Prior Decision

The Supreme Court of the United States last week handed down a decision holding, in an action to recover excess fares, that the defense that the rates fixed by Missouri statute are confiscatory is barred by its prior decision in the Missouri Rate Cases.

The action was one by the State of Missouri against the Chicago, Burlington & Quincy to recover a sum of money for passenger fares in excess of the rate established by law paid by its officers when traveling within the state on state business. Answering, the railroad alleged, among other defenses, that the

rates fixed by law were so low as to be confiscatory. The state moved to strike out this defense on the ground that the right to assert it had been barred by a decree of the United States Supreme Court establishing that the rates fixed by the state law were lawful and not confiscatory—a decree the conclusive effect of which, it was asserted, the railroad was estopped from denying; and this view prevailed.

The case in which the decree relied on by the state was rendered is known as the Missouri Rate Cases, 230 U. S. 474 (consolidated actions decided at the same time as the Minnesota Rate Cases). The court stated the essential facts of that case as follows: In April, 1905, Missouri by law established certain freight rates. Almost at once the Burlington and other railroads filed their bills in the Circuit Court of the United States to enjoin the carrying out of the law on the ground that to enforce the rates which it fixed would result in confiscation and a taking of the property of the railroads in violation of the Constitution. An injunction was granted prohibiting the carrying into effect of the rate law. While these suits were pending, the state by law fixed a passenger rate, and, repealing the freight law which had been enjoined, enacted another, and by supplemental bills both these laws were assailed by the railroads on the grounds upon which the other law had been attacked, and injunctions were awarded restraining their enforcement. After hearing much testimony on the issue of confiscation, the court permanently enjoined the enforcement of the state statutes. On review in the Supreme Court of the United States, as to the Burlington and other railroads, this conclusion was held to be erroneous, and the decree of the lower court was reversed, and the case was remanded with directions to dismiss the bill without prejudice.

Speaking as to the form of this decree, the court, by Mr. Chief Justice White, said that "in a rate case where an assertion of confiscation was not upheld because of the weakness of the facts supporting it, the practice came to be that the decree rejecting the claim and giving effect to the statute was, where it was deemed the situation justified it, qualified as 'without prejudice,' not to leave open the controversy as to the period with which the decree dealt, and which it concluded, but in order not to prejudice rights of property in the future if from future operation and changed conditions arising in such future it resulted that there was confiscation. And the same limitation, arising from a solicitude not to unduly restrain in the future the operation of the law, came to be applied where the asserted confiscation was held to be established. In other words, the decree enjoining the enforcement of the statute in that case was also qualified as without prejudice to the enforcement of the statute in the future if a change in conditions arose."

The railroad had insisted upon the right to assert as against the individual suit of the state the existence of the confiscation for the very period covered by the previous finding that there was a failure to establish the confiscation, because the reservation without prejudice which was made in that decree left the whole subject open for a renewed attack as to individuals, and indeed by general complaint as to the unconstitutionality of the law as a whole. But the court considered that this proposition disregarded the foundation on which such a reservation came to be applied, as above pointed out, in cases involving an assault upon the present and future operation of a law fixing rates. In other words, the contention accepted the doctrine announced, and yet repudiated the cases by which that doctrine was established by affixing a meaning to the reservation "without prejudice" as used in the cases wholly destructive of the sole object and purpose for which in those cases the reservation came to be applied. Again it was said, conceding that the limitation without prejudice when applied to a rate case under the authorities has the significance which the United States Supreme Court has affixed to it, that meaning should only prevent the re-opening of the inquiry as to the period embraced by the testimony in the case, and therefore should not be extended so as to prevent the re-opening from the time at least of the close of the testimony. This, it was said, must be the case since there might well be a change in conditions between the time when the proof in a case was taken and the entry of the final decree. But the court said that this contention again disregarded the doctrine on which, as it had pointed out, the reservation in rate-making cases came to be applied. In other words it treated the

reservation without prejudice as looking backward and over-throwing that which was concluded by the decree instead of considering it in its true light, that is, as looking forward to the future, and providing for conditions which might then arise.

Conceding for the argument's sake the controlling influence of what the court had said, the railroad contended that the previous decree was here inapplicable since the state was not a party to the litigation in which the decree was entered, indeed, could not have been made a party without its consent; but this contention was not sustained, the court considering that this proposition ignored the doctrine settled by the previous cases that there inhered in, and went along with, the rate-making power a duty on the part of the state to afford means for judicially deciding a question of confiscation when asserted. The state's motion was granted. Mr. Justice McKenna dissented without opinion.—*Missouri v. Chicago, Burlington & Quincy*. Decided June 12, 1916.

Power Brake Law Applicable to Electric Roads

The Supreme Court of the United States has handed down a decision holding that the clause of the safety-appliance acts requiring trains to be equipped with power brakes applies to electric trains as well as to steam trains.

The suit was one by a motorman for personal injuries, based on the federal employers' liability act, originally brought in the federal district court of Washington, D. C. The injury was on a single track electric railway between Spokane, Washington, and Coeur d'Alene, Idaho. It was operated under standard railroad rules, and the usual practices by a time table; and telegraphic orders were issued by a train despatcher. The motorman had been in the company's employ for several years, and was conversant with its rules and methods. He was in charge of a special between Spokane and Coeur d'Alene, made up of a combined motor and passenger car, known as Motor 5, and two other cars. The train was equipped with Westinghouse air brakes. After several trips, the train was at Coeur d'Alene about 4:30 p. m., ready to start for Spokane. Regular train No. 20 was due to arrive. Under [oral] orders the nature of which was disputed, the motorman started out and had proceeded some distance when he discovered an opposing train (No. 20). He applied the brake but did not avert the collision. The jury found in favor of the plaintiff for \$7,500 damages with three special findings: (1) That the motorman before leaving Coeur d'Alene received a train order: "Motor 5 will run spl. C. d'Alene to Spokane, meet special 4 at Alan;" (2) that the air brakes on his train were insufficient to enable him to control its speed; (3) that his leaving Coeur d'Alene in violation of his orders was the proximate cause of the accident. On appeal, the United States Supreme Court holds that the jury was warranted in finding from the evidence as a whole that the motorman properly applied the brakes when 600 feet or more from the place where the collision occurred, and that the brakes refused to work.

One of the defendant's contentions was that the train was not such as the safety appliance acts require to be equipped with air brakes. It was argued that the provision requiring power brakes, when read in connection with the context of the acts, indicates that trains drawn by steam locomotives and operated by a locomotive engineer were alone within the contemplation of Congress.

The court said it was true that in the act of 1893 the provision was closely associated with the mention of a locomotive engine as the motive power; but the 1903 amendment, which was enacted for the purpose of enlarging the scope of the act, in its first section declares that the provisions relating to train brakes (among others) shall be held to apply to "all trains, locomotives, cars, and similar vehicles used on any railroad engaged in interstate commerce * * * and to all other locomotives, tenders, cars, and similar vehicles used in connection therewith," subject to exceptions not pertinent to this case. The second section declares that "* * * not less than fifty per cent of the cars shall have their brakes used and operated by the engineer * * *". Mr. Justice Pitney, delivering the opinion of the court, said: "Of course, an important object of having a train equipped with a system of brakes under the single control of the engineer is to permit of a prompt and effective reduction of speed when the man driving the train is notified of

danger. The importance of this is precisely the same whatever be the motive power, and, in view of the beneficial purpose of the act and the evident intention of Congress to enlarge its scope so far as necessary to guard against the dangers in view, the term 'similar vehicles' must be held to have the effect of bringing electric motors and trains drawn by them within the provision respecting power or train brakes. The very exemption of trains, cars, and locomotives 'used upon street railways' indicates that electric cars were in contemplation."

The defendant also argued that the purpose of the brake requirement was to place the control of the train in the hands of the engineer so that the safety of passengers and employees may be conserved, not that the engineer should be able to escape injury from peril to which he had wrongfully exposed himself; and that the plaintiff could not bring himself within the class intended to be protected by pointing out that the situation created by his disobedience of orders was one that Congress contemplated as possible and the consequences of which it desired to guard against. The court held that this gave too narrow a meaning to the safety appliance act, and was inconsistent with the provisions of the 'employers' liability act. Where, it was held, the plaintiff's contributory negligence and the defendant's violation of a provision of the safety appliance act are concurring proximate causes, the 'employers' liability act requires the former to be disregarded.—*Spokane & Inland Empire v. Campbell*. Decided June 12, 1916.

COURT NEWS

Custom—Liability for Goods Sold to Employees

A uniform custom of a railroad to make deductions from the wages of its employees in favor of persons having claims against them, in accordance with a statement in a time book constituting an order upon the company, and signed by the employees, which was done for the accommodation of the employees and without consideration, did not, the Texas Court of Civil Appeals holds, constitute an assumption of primary liability by the railroad for goods sold by one relying on this custom, to its section gang at the request of the section foreman.—*St. Louis Southwestern v. Ragsdale, Price & Co. (Tex.)* 185 S. W. 654.

Meaning of "Cleaned and Disinfected" Hog Cars

In an action to recover the value of hogs which died of cholera during shipment, the plaintiff, having averred that the cars furnished were not clean as required by rule 31 of the Texas State Live Stock Sanitary Commission, declaring that all cars for the loading of hogs shall be thoroughly cleaned and disinfected, the Texas Court of Civil Appeals holds that the plaintiff has the burden of proving that allegation. The term "clean" in the statute, in view of the use of the word "disinfected," does not necessarily mean that the cars shall be free from all dirt, but that they shall be free from infection.—*Clampitt v. St. Louis Southwestern (Tex.)* 185 S. W. 342.

Delivery of Goods to Railroad—Cotton Car on Spur

The owners of a cotton gin, located on a railroad spur, in accordance with custom, notified the conductor of a local freight that they desired a car to load with cotton. The conductor left a car on the spur, which the gin owners loaded and closed all the doors. The car was destroyed by fire before it could be picked up by the next freight going in the proper direction. The Arkansas Supreme Court holds that the railroad was not liable for the loss, as there was no delivery to it of the cotton, and could have been none, until the conductor was notified that the car was loaded and ready for immediate shipment, and he had accepted it, either verbally, or by issuing a conductor's receipt, according to custom.—*Matthews v. St. Louis, I. M. & S. (Ark.)* 185 S. W. 461.

Agreement for Lifetime Free Pass Unenforceable

An owner granted a right of way through his lands for a valuable consideration expressed in the deed, and the railroad, engaged in interstate commerce, orally agreed that as part of the consideration, not so expressed, it would issue to him annually for life a pass over its road. Personal transportation for

any compensation but money being prohibited by the act of 1906, the West Virginia Supreme Court of Appeals holds that the railroad's failure or refusal to issue the pass because so prohibited would not entitle the owner to a decree for specific performance of the oral agreement, or for rescission of the grant, neither the agreement nor the grant providing for either remedy in the event of such failure or refusal.—*Door v. C. & O. (W. Va.)*, 88 S. E., 666.

Computation of Damages

The fundamental and controlling principle in damage suits where personal property is involved is that the injured party shall have actual pecuniary compensation for the injury received, so that he may be placed as near as may be in the condition which he would have occupied but for the injury. In an action for injuries to a shipment of 1,000 bushels of corn, while it appeared that the whole of it was damaged, it also appeared that the plaintiff was able to dispose of 367½ bushels at its full market value. The Texas Court of Civil Appeals holds that, to that extent, applying the rule of compensation, his damages were decreased, and it was error to allow recovery of damages, although actually suffered, of 18½ cents a bushel on the whole 1,000 bushels.—*Houston v. Texas Central (Tex.)* 185 S. W. 593.

Care Towards Passengers on Freight Train

The Texas Court of Civil Appeals holds that the test of due care towards a passenger in the caboose of a freight train is not what railroad employees usually do, but rather what prudent and cautious men would do under the same or similar circumstances. What may be a prudent method of handling a freight train on one occasion when carrying freight only, may be reckless conduct at another time when passengers are aboard. In the present case, while the caboose was standing on the main line, the engine and other cars were backed against it with such violence that the plaintiff was thrown against a desk and had several of his ribs broken. There being evidence that he might continue to suffer from his injuries, and that his efficiency in any character of service would be impaired, it was held that a verdict of \$2,000 was not excessive.—*Paris & G. N. v. Atkins (Tex.)* 185 S. W. 306.

Hand Car Accident—Obedience to Rules

The Nebraska Supreme Court holds that where a section foreman has notice of the railroad's rules requiring him on approaching a sharp curve through a deep cut on a hand car to send a man ahead to look for a train, the mere failure of trainmen to give warning of their approach before the presence of sectionmen on the track is discoverable is not negligence, in the absence of a statute or a rule requiring them to do so. The trainmen may assume, until the contrary appears, that sectionmen will obey reasonable, known rules promulgated for the safety of themselves and others; and where the foreman breaks the rules and is killed on failing to jump from the car before collision, no recovery can be had for his death. Failure to sound the whistle on approaching an undergrade roadway is not negligence in the absence of a statute imposing such a duty.—*McCracken v. Delano (Neb.)*, 157 N. W., 917.

Punishment for Selling Cut Rate Tickets

A person who violated an injunction against him, restraining him from selling a ticket for less than the legal fare, was adjudged in contempt and punished. The Circuit of Appeals, Second Circuit, holds that, as the defendant presumably prevented the railroad company from selling a full-rate ticket, he might properly, on application of the company, be fined a sum compensating it for its loss; the fact that such fine might act as a deterrent being no objection to its imposition. In such a case it would not be sufficient to fine the defendant merely the difference between the two tickets, as the company had been put to the trouble and expense of watching the defendant to ascertain if he were violating the injunction, of securing evidence of the fact, and of presenting it to the court, and the fine should be large enough to cover all these items. If the defendant should fail to pay the fine, the court could further order that he be imprisoned until he paid it.—*Delaware L. & W. v. Frank*, 230 Fed., 988.

Consignee, "Care of"—Notice of Claim

Cattle shipped from Georgetown, Ky., were consigned to "Clay, Robinson & Co., Chicago, Ill., care of Green & Embry, Cincinnati, Ohio," independent firms of cattle dealers in the respective cities. The railroad sent the cattle straight through to Chicago. The shipper sued for damages, claiming that the cattle were shipped to Chicago, with the privilege to the shipper of taking them off at Cincinnati, through which city they would pass, for the purpose of selling them, if he desired to do so. The Kentucky Court of Appeals held that, Cincinnati being on the route of the shipment, it was the railroad's duty to deliver it to the Cincinnati firm there. It also held that a stipulation in the bill of lading for prompt notice of damages did not apply, such stipulation only applying to claims for damages on account of some physical injury or loss suffered by the live stock while in the railroad's custody.—*Cincinnati N. O. & T. P. (Ky.)*, 184 S. W., 1,132.

Killing Dogs—Evidence

In an action for the value of a dog alleged to have been killed by a train the only evidence was that the dog was seen approaching the track 30 minutes before the train passed, and its dead body was afterwards discovered close to the track, but without any apparent bruise. Without passing on the question whether the Georgia rule that a suit cannot be maintained against a railroad for the killing of a dog unless the killing was wanton, malicious or intentional was changed by the statute of 1912 making dogs personal property, the Georgia Court of Appeals holds there was no evidence from which it could be more than conjectured that the dog was killed by the train. To hold otherwise would open the way for boundless frauds, for unscrupulous persons might breed dogs for the purpose of poisoning them and distributing their bodies along the tracks and recovering damages from the owners of the railroad.—*A. G. S. v. Price (Ga.)*, 88 S. E., 692.

Damages for Carrying Passengers Past Station

Where a female passenger was negligently carried past her station, being forced to walk back four or five miles in the day time, when the weather was cold and the ground muddy, the Mississippi Supreme Court held that an award of \$450 was not excessive, it appearing that she had spent \$1.20, all she had, in hack hire, and that she suffered with a bad cold for about a week, and the cold aggravated a weakness of her eyes.—*Yazoo & M. V. v. Hearn (Miss.)*, 71 So., 561.

The same court held that where a female passenger, the companion of the plaintiff in the above case, was carried beyond her station and walked home four or five miles over a muddy road, becoming tired and hungry, and missing a meal, an award of \$500 was excessive, it appearing that her only pecuniary damage was the expenditure of 20 cents for a ticket, and the award could not be sustained for more than \$100.—*Y. & M. V. v. Smithart (Miss.)*, 71 So., 562.

Railroad's Duty to Trim Overhanging Branches

In an action for killing cattle on the track it was claimed by the railroad that the engineman could not see them in time to stop because of the branches of trees, which overhung the track. The Kentucky Court of Appeals holds that it is the duty of a railroad to keep its right of way free from unnecessary obstructions that interfere with the view of the men on the engine, whether itself or others were responsible for such obstructions. It has the right to remove such limbs of trees standing within the inclosure of an adjacent owner. *Hickey v. Michigan Central (1893)*, 96 Mich., 498. The trees stood on the land of the party whose cattle were killed, but this does not prevent him from setting up this claim of negligence. The jury, however, appear to have based their verdict for the plaintiff on testimony that the engineman did not discover them as soon as he might have done, or else did not stop the train as soon as possible after discovery.—*Chesapeake & Ohio (Ky.)*, 185 S. W., 71.

Crossing Accident—Distraction of Attention

An adult pedestrian, in full possession of his faculties, desiring to cross at a crossing, a four-tracked railroad, the last track

of which was blocked by stationary cars, stopped at the end of the ties of the third track, where he stood for several minutes engaged in conversation with another man, thinking the cars were about to be pulled away. He did not at any time look along the third track to see if another train were coming, but claimed that his attention was distracted by a train approaching on the second track. He was struck and injured by a train on the third track. The Tennessee Supreme Court held that he was guilty of such gross negligence as to preclude his recovery, even though the railroad employees were negligent as to a look-out. The fact that he was watching a train approaching from the opposite direction on the second track did not relieve him from contributory negligence, since distraction of attention excuses failure to exercise the senses only when it renders their use impracticable.—*Todd v. C. N. O. & T. P. (Tenn.)*, 185 S. W., 62.

Injuries to Passengers from Baggage in Aisles

In a passenger's action for injury from falling over a suit case in the aisle of a car, the Alabama Court of Appeals holds that the mere fact that a suit case projected in the aisle of a car without a showing that it was under the management or control of the railroad or its servants, and that in the ordinary course of events injury to a passenger from falling over it would not have happened but for some negligence attributable to the railroad, did not make out a prima facie case of negligence for the jury. The court cited the case of *Stimson v. Milwaukee, L. S. & W.*, 75 Wis., 381, where the facts were almost identical with the present case, and the court there said: "There may be a duty on the part of the employees of the company to remove the personal baggage of passengers from the passageways of the cars, but in order to make it their duty to act, there must be evidence showing, or at least tending to show, that such employees had notice of such obstruction being in the aisle or passageway, or that it had remained there so long before the accident that, in a reasonably vigilant discharge of their duties, they could have discovered the obstruction before the accident happened, and failed to remove it."—*Alabama Great Southern v. Johnson (Ala.)*, 71 So., 620.

Duty Towards Mail Clerks—Heating Cars

The duty to furnish proper heat for a postal car grows out of the duty to postal clerks as passengers, and they are passengers because the railroad is carrying them for hire under contract with the United States. The Kentucky Court of Appeals holds that the relation, having been established by contract, implies consent of both parties, and consent of the railroad can be asserted only with reference to such times and places as it has knowledge, either express or implied, of the presence of such clerks in the cars. It, therefore, necessarily results the relation cannot begin at a place or time, or continue until a place or time, of which the company has no actual or implied knowledge. Action was brought to recover damages for illness to the plaintiff, a mail clerk, resulting from the Louisville & Nashville's failure to heat a mail car after its arrival in Nashville, from 2:35 a. m. till about 5:30 a. m., on January 24, 1914, while the plaintiff was in the car assorting mail. The trial court refused to permit the railroad to prove that ordinarily the postal clerks left the car upon this run immediately on arrival in Nashville; that when it was going to be used longer it was the custom to notify the railroad; and refused to submit to the jury the question of notice. On appeal, this was held to be error. Judgment for the plaintiff was reversed, and a new trial granted.—*Dougherty*, 185 S. S. 114.

Employer Not Liable to Employee for Overtaxing Strength

A master is under no duty to prevent his servant from becoming overheated at his work, resulting from atmospheric or weather conditions, as these are matters entirely beyond his control. The Kentucky Court of Appeals holds that a railroad employee, 49 years old, who worked drying sand, could not recover for injuries caused by his having become overheated at his work, he having assumed the risk, or by overtaxing his physical strength. His claim was that the night men did not do as much work as they ought to have done, in consequence of which he, as day man, had to do more than his share, notwithstanding his frequent complaints. In reversing a judgment for the plaintiff, the court

said, "It is a pathetic thing to see a trusted employee, who has faithfully toiled in the service of his employer until he has reached the limit of his physical endurance, cast adrift; but until there has been a revolution in our whole industrial system such things must be . . . The only safe and practical rule is that each man is the best judge of his own physical strength and powers of endurance; that he knows better than any other can when the limit has been reached, and when, in following his own instinct of self-preservation, he must desist and exercise his right under the law to give up his work if it is more than he can stand."—*L. & N. v. Sawyers* (Ky.), 184 S. W., 1123.

Sufficiency of Announcement of Change of Cars

A resident of Little Rock bought a round-trip ticket to Heber Springs over the St. Louis, I. M. & S. to Kensett, and thence over the Missouri & North Arkansas to destination. She was carried beyond Kensett, where she should have changed cars, and sued the St. Louis, I. M. & S. for failure to notify her that she must change. The Arkansas Supreme Court held that if, as claimed by the flagman at Kensett, an announcement was there made of the necessity for a change of cars to points north on the Missouri & North Arkansas, the plaintiff was bound to take notice of her route and make the necessary change. She was an adult, apparently of ordinary intelligence, and in full possession of her senses. Therefore the railroad was not required to give her special notice of the necessity for a change of cars. All that the law required was that a suitable regulation be made for the convenience of passengers, and that reasonable steps be taken to bring those regulations to the attention of the passenger, no further individual notice being required. The plaintiff claimed she did not know Heber Springs was on another line. But the court held the announcement of necessity of change for points on another line should have put the plaintiff on an enquiry which she would have pursued by asking information of the conductor.—*St. Louis, I. M. & S. v. Needham* (Ark.), 184 S. W., 47.

Serving Notice on Non-Resident Railroads

An attempt was made to sue a non-resident railroad by serving it through two alleged agents, a resident railroad and an individual. With regard to the first the Washington Supreme Court holds that the issuance by a resident railroad company for non-resident companies of coupon tickets and through bills of lading is insufficient to create agency for service of process. As to the second, it holds that a general agent of a subsidiary railroad company, a majority of the stock of which is held by the principal company, who receives a compensation from the subsidiary company and makes contracts for it for shipment and passage over the road of the principal company as well as other companies, is not an agent of the principal company on which process may be served for the company. "Considering," the court said, "the multitude of corporations and that, unlike individuals, they can be served through agents, all courts have shrunk from a rule which would swamp home tribunals with foreign brawls. Nor have we any desire through the same rule to expose our own incorporated merchants and carriers to like service in suits in every other state. Undoubtedly the universal opinion that solicitors for non-resident railroads and commercial houses are not agents for local service arises from these two apprehensions, and it was also foreseen to be unfair, as well as injurious to interstate commerce, to subject such principals to suits in our more than 40 states, while the plaintiffs in most cases would be exposed to suit only at home."—*Royce v. C. & N. W.* (Wash.), 156 Pac. 16.

Trespassers on Tracks

The Kentucky courts held that the rule requiring men operating trains to anticipate the presence of persons on the track, and to maintain a lookout for them, and give warning of trains, is confined to cities or thickly populated communities, and does not extend to sparsely settled places, though the tracks at these places may be used by a large number of persons. Those in charge of a train owe a trespasser no duty other than ordinary care to avoid injuring him after discovering his peril. The rate of speed of a train is immaterial to the question of the railroad's liability for injury to a trespasser. A man was killed by a train

while he was walking between the rails at a point about 100 feet from a county road crossing. This portion of the track was frequently used by the public as a short cut. The train had just left a deep cutting, after which there was a long curve on a heavy fill. The engineer and a brakeman were both keeping a lookout, but, because of the walls of the cutting and the great curve, could not have seen the deceased until the train was within 30 or 40 yards of him. Assuming they then saw him, they could not have stopped the train in time to save him. The fact that the accident occurred within 100 yards of a public crossing did not affect the railroad's liability, since the duty of maintaining a lookout or giving signals at crossings is not for the benefit of persons on other parts of the railroad. When the train left the cut the whistle was sounded three times, but an eye-witness testified the deceased paid no attention. The deceased was 47 years of age, of average intelligence, and without defect of vision or hearing. The Kentucky Court of Appeals held that there was no negligence on the part of the railroad's servants, but that the deceased's death was caused solely by his own negligence.—*Sizemores Admr. v. Lexington & Eastern* (Ky.), 184 S. W., 383.

Sparks—Care Required of Adjoining Owners

Owners of a tract of land sued a railroad for damages to grass by seven fires occurring during two summer months, burning 625 acres. The plaintiffs alleged negligence in using faulty spark arresters, and also in failing to burn fireguards 200 feet wide along the right of way, as for a number of years had been done. One of the railroad's special defenses was that before any of the fires occurred it had asked plaintiffs' permission to burn fireguards on their land, offering to pay for the grass so burned; but that the plaintiffs refused except on payment in advance. The trial court sustained a demurrer to the railroad's plea of contributory negligence caused by such refusal. On appeal, the Texas Court of Civil Appeals holds this to be error, on the authority of *St. Louis Southwestern v. Arey* (Nov. 10, 1915), 179 S. W. 860, a suit for the destruction of a barn by fire, caused by sparks from a passing engine blown through a window facing the right of way which the plaintiff had left open. The railroad pleaded contributory negligence on the part of the plaintiff in leaving the window open, and the Texas Supreme Court held the submission of this defense to the jury was proper. That case overruled all prior Texas decisions to the contrary, and the court there refused to follow the United States Supreme Court in *LeRoy Fibre Co. v. C. M. & St. P.* (1913), 232 U. S. 340, where it was held that it is not a question for the jury whether an owner who lawfully stores his property on his own premises is held to the exercise of reasonable care to protect it from fire due to the negligence of the railroad; and that in an action by the owner of flax lawfully stored on his own premises and destroyed by fire caused by the negligent operation of a locomotive, it was not a question of the jury whether the owner was also negligent without other evidence than that the flax was inflammable and stored near the track. "If," the Texas Court of Civil Appeals said, "a person of ordinary prudence could and should have anticipated that the railway company probably would, through its negligence or otherwise, permit sparks to escape from its locomotives and set fire to property of the character and located as was plaintiffs' property, then the plaintiffs owed the duty to exercise ordinary care in advance of such negligence to avoid injury therefrom. And why not? It is a well-settled rule of common law that a person of ordinary prudence owes the duty to exercise ordinary care to avoid injury from an act or omission of another amounting to negligence, when he is apprised of such act or omission. Upon reason and principle, why should he be excused from the exercise in advance of like precautions to avoid injury from negligence which a person of ordinary prudence would foresee as probable and the consequences of which he would endeavor to avoid? A different rule would encourage a wilful exposure to danger which even the slightest prudence would avoid and would be contrary to sound public policy. Tested by the common experience of men, no one of ordinary prudence, when confronted with an impending danger to his person or property, will do less to avoid its probable consequences because of the fact that such danger is brought about by the negligence of some one else." Judgment for the plaintiffs was reversed and the case remanded for a new trial.—*Fort Worth & D. C. v. Hapgood* (Tex.), 184 S. W., 1075.

Railway Officers

Operating

R. P. Dalton has been appointed superintendent of the Manufacturers' Railway, St. Louis, Mo., vice S. M. Woodard resigned, effective June 12.

Murrell L. Buckner, secretary and treasurer of the Union Terminal Company, of Dallas, Tex., has been appointed superintendent. Mr. Buckner was born at Paducah, Ky., on September 16, 1875, and



M. L. Buckner

and was educated at the Kentucky Military Institute at Frankfort, Ky. He went to Texas in 1892, and when the Union Terminal Company was formed at Dallas in June, 1912, was elected secretary and acting auditor. He held both of these positions until May, 1914, when A. M. Steirer was elected auditor. In September, 1915, he was elected treasurer, as well as secretary, and held both positions until June 1, 1916, when he was appointed superintendent.

George James has been appointed assistant superintendent of freight transportation of the Cleveland, Cincinnati, Chicago & St. Louis, with office at Indianapolis, Ind.

W. M. Jeffers, recently appointed general manager of the Union Pacific, was born at North Platte, Neb., on January 2, 1876, and entered railway service as a messenger boy on the



W. M. Jeffers

Union Pacific on June 1, 1890. In 1892, he became a telegraph operator, and between 1896 and 1905 was employed as train despatcher and chief despatcher. From 1905 until 1907, he was trainmaster of the same road and from 1907 to 1909, an assistant superintendent. In 1909, he was appointed superintendent and remained in that position until 1915, when he was promoted to general superintendent. On June 3, 1916, he was appointed general manager of the Union Pacific System, with

headquarters at Omaha, Neb., vice Charles Ware, resigned. His entire railroad career has been with the Union Pacific.

J. B. Campbell has been appointed general manager of the Memphis, Dallas & Gulf with headquarters at Nashville, Ark., vice J. E. Votaw, deceased. His authority will extend over all departments of the company except those of auditing and traffic.

Charles A. Phelan, trainmaster of the Illinois Central on the Chicago, Bloomington, Pontiac and Tracy districts and the Gilman line, with office at Kankakee, Ill., has been appointed general manager of the Missouri & North Arkansas, with headquarters at Harrison, Ark.

Patrick K. Hanley, trainmaster of the Clinton, Havana and Decatur districts of the Illinois Central, with office at Clinton, Ill., has been transferred to the Chicago, Bloomington, Pontiac and Tracy districts and the Gilman line, with office at Kankakee, Ill., vice Charles A. Phelan, resigned to accept service with another company. William A. Golze has been appointed trainmaster, with office at Clinton, Ill., in place of Patrick K. Hanley, transferred.

Arthur B. Ramsdell, whose appointment as assistant general manager of the Chicago, Rock Island & Pacific, with office at Des Moines, Ia., has been announced in these columns, was



A. B. Ramsdell

born at Tama, Iowa, on October 3, 1873. He first entered railway service on July 1, 1891, with the Rock Island, and has been in the employ of that road ever since. He was general clerk and ticket auditor until March 15, 1893, when he became stenographer in the office of the superintendent of the Chicago Terminal. He was later chief clerk in the same office, and on February 15, 1904, was appointed trainmaster of the Chicago Terminal, remaining in that position until May 1, 1906, when he was made

trainmaster of the Colorado division. He was transferred in the same capacity to the Iowa division on December 1, 1906, and to the Illinois division on January 1, 1909. He was appointed superintendent of the Chicago Terminal on December 15, 1909, remaining in that position until February 1, 1912. He was then appointed superintendent of the St. Louis division, and on January 8, 1913, was transferred to the Kansas division. From June 1, 1914, to May 31, 1916, he was superintendent of the Illinois division, when he became assistant general manager of the first district, with headquarters at Des Moines, Iowa.

Traffic

J. F. Vosburgh, whose appointment as assistant general freight and passenger agent of the Chicago & Alton, with office at Chicago, has been announced, was born in Wisconsin and educated in the public



J. F. Vosburgh

schools of Oshkosh, Wis. He entered railway service as stenographer and clerk in the office of the superintendent of the Hastings and Dakota division of the Chicago, Milwaukee & St. Paul at Minneapolis, Minn. From there he went to the office of the Northwestern passenger agent of the same road at St. Paul, where he was employed in a similar capacity, subsequently leaving that office to become chief clerk to assistant superintendent of the Chicago, Rock Island & Pacific at Minneapolis in the latter part of

1902. When this office was abolished he entered the service of the Minneapolis, St. Paul & Sault Ste. Marie in the same city as secretary for the general passenger agent. In October, 1903, he became secretary to the general freight agent of the Minneapolis & St. Louis at Minneapolis, and from that time until De-

cember, 1909, when that road was consolidated with the Iowa Central, Toledo, St. Louis & Western and the Chicago & Alton, held various positions in the freight department. Coincident with the consolidation he went to Chicago as assistant chief clerk in the general freight department of the four lines, but returned to Minneapolis in December, 1910, when the lines were segregated to become chief clerk to the traffic manager of the Minneapolis & St. Louis. He held this position until August, 1914, when he went to Chicago as chief clerk to the general traffic manager of the Chicago & Alton, from which position he was promoted to assistant general freight and passenger agent on May 1.

B. C. Willis has been appointed traffic manager of the St. Louis, Kennett & Southwestern with headquarters at Kennett, Mo.

F. J. Bambach has been appointed general agent, passenger department, of the New York Central Lines, with headquarters at Duluth, Minn.

Ralph S. Stubbs, general freight agent of the Southern Pacific, Atlantic Steamship Lines has resigned to become traffic manager of the American Sugar Refining Co. with office at New York.

W. T. Stevenson, assistant general freight agent of the Cleveland, Cincinnati, Chicago & St. Louis, has been promoted to general freight agent with office at Cincinnati, Ohio. John W. Clark, division freight agent at Cleveland, Ohio, has been promoted to assistant general freight agent at Cincinnati, vice Mr. Stevenson. J. M. Breen, general agent at Pittsburgh, Pa., has been appointed division freight agent at Cleveland, vice J. W. Clark. A. F. Meyer, commercial agent at Kansas City, Mo., has been promoted to general agent at Pittsburgh, vice Mr. Breen. K. A. Moore, commercial agent at Nashville, Tenn., has been transferred in the same capacity to Kansas City, vice Mr. Meyer. G. C. Chamberlain has been appointed commercial agent at Nashville, Tenn., in place of Mr. Moore, effective June 15.

Engineering and Rolling Stock

P. J. Clark has been appointed master mechanic of the Ocilla Southern, succeeding G. W. Stubbs, resigned.

R. J. Watters has been appointed assistant general air brake inspector of the Northern Pacific, succeeding D. A. McMillan, assigned to other duties.

A. G. Williams, assistant master mechanic of the Pennsylvania Lines West, has been appointed assistant engineer of motive power, succeeding L. B. Jones, transferred.

Walter Hamilton has been appointed assistant master mechanic, Pennsylvania Lines West, with headquarters at Ft. Wayne, Ind., vice F. T. Huston, promoted.

F. T. Huston, assistant master mechanic of the Pennsylvania Lines West at Fort Wayne, Ind., has been appointed general car inspector of the northwest system of the Pennsylvania Lines West, succeeding O. J. Parks, resigned.

James Fitzmorris, master mechanic of the Chicago Junction Railway has been appointed superintendent of motive power with office at Chicago. P. A. Campbell, chief clerk in the machinery department has been appointed assistant superintendent of motive power with office at Chicago.

OBITUARY

George Gilmour, a trustee and member of the executive committee of the Museum of Safety, and head of the inspection department of the Travelers' Insurance Co., died at his home in Brooklyn on June 15. Mr. Gilmour was a member of the American Society of Mechanical Engineers.

Silvanus P. Thompson, an electrical engineer and physicist and a former president of the Institution of Electrical Engineers, died in London on June 13. Mr. Thompson was born in New York and was a graduate of the Boothom School of New York and last visited the United States in 1893.

Equipment and Supplies

LOCOMOTIVES

THE TEXAS & PACIFIC is making inquiries for eight Santa Fe locomotives.

THE PENNSYLVANIA EQUIPMENT COMPANY is in the market for a second-hand gas, electric or storage battery locomotive of 40 to 45 tons capacity.

FREIGHT CARS

THE TEXAS & PACIFIC is inquiring for eight combination baggage and mail cars.

THE SEABOARD AIR LINE has ordered from the Standard Steel Car Company 50 cabooses.

THE RUSSIAN GOVERNMENT inquiry for 1,000 flat cars mentioned in the *Railway Age Gazette* of June 2, it is said, have been revived.

THE PRESSED STEEL CAR COMPANY is repairing 500 gondola cars for the New York, Chicago, & St. Louis, and is putting into them new center constructions.

THE HAVANA CENTRAL has ordered from the Pressed Steel Car Company 200 box cars of 30 tons capacity, 200 platform cars of 20 tons capacity and 10 hopper cars.

THE MINERAL POINT ZINC Co. has ordered 80 mine car bodies from the American Car & Foundry Co., not 89 car bodies as reported in the *Railway Age Gazette* last week.

PHELPS DODGE & COMPANY have ordered six ore cars from the Pressed Steel Car Company, and 82 center constructions from the Western Steel Car & Foundry Company.

PASSENGER CARS

THE CHICAGO & NORTH WESTERN has ordered from the American Car & Foundry Company 57 passenger cars.

THE CANADIAN GOVERNMENT RAILWAYS have ordered 500 additional box cars from the Canadian Car & Foundry Company.

THE CHICAGO, LAKE SHORE & SOUTH BEND is making inquiries for ten passenger coaches in addition to two baggage express cars already reported.

THE PULLMAN COMPANY has received three orders for private cars; one from the Canadian Pacific, one from the Delaware, Lackawanna & Western and one from J. B. Duke, of New York.

IRON AND STEEL

THE CHICAGO, INDIANAPOLIS & LOUISVILLE is making inquiries for 1,000 kegs of spikes.

THE CHICAGO GREAT WESTERN has ordered an additional 1,000 tons of rails from the Illinois Steel Company.

THE WABASH has ordered the steel for three girder bridges to be built at Attica, Ind., and Toledo, Ohio, from the American Bridge Co. The total amount of steel ordered is 266 tons.

THE CHICAGO, MILWAUKEE & ST. PAUL has ordered 111 tons of steel for use in the Lake street subway and South Water street subway, Milwaukee. The order has been placed with the Wisconsin Bridge & Iron Co.

SIGNALING

THE ILLINOIS CENTRAL is preparing plans for a brick and concrete interlocking tower, 18 ft. by 33 ft., at Kensington, Ill., to cost about \$6,000.

THE PENNSYLVANIA LINES WEST will install an interlocking plant at its crossing with the Cincinnati, Hamilton & Dayton and the Lake Erie & Western at Lima, Ohio. The latter roads have completed a short stretch of double-track for joint use at this point.

Supply Trade News

The Illinois Steel Company has ordered 900 tons of steel from the American Bridge Company for an extension to its foundry building at Gary, Ind.

The Illinois Central has awarded contracts for water tanks at Hawthorne, Ill., Mt. Pulaski, Carbondale, Bloomington, Champaign and Effingham, Louisville, Ky., and Kentwood, La. to the Chicago Bridge & Iron Works.

The business and good will of the Commercial Acetylene Railway Light & Signal Co., New York, except the welding department has been acquired by the AGA Railway Light & Signal Co., 80 Broadway, New York.

The firm name of Woonham, Sanger & Bates, Inc. of New York and London has been changed to Woonham, Bates & Goode, Inc. Henry A. Goode has been associated with the company for the last seven years and has acted as a director since 1911.

R. E. Williams, formerly auditor of the International & Great Northern and the Texas & Pacific has joined the railway's sales department of the Patton Paint Co., Milwaukee, Wis., and will in conjunction with W. E. Kelley have charge of the business of the Patton Paint Co. in the Southwest.

The Texas Steel Company, Beaumont, Tex., has been incorporated in the State of Texas for \$2,500,000, \$1,500,000 of which has been subscribed for and the remaining \$1,000,000 of which will soon be offered at par. A suitable site for a steel plant has been secured at Beaumont and the iron ores of Cass, Marion and Upshur counties of that State will be used as the source of the metal supply.

The Vulcan Soot Cleaner Co., DuBois, Pa., have secured through their New York representatives, the DeVed-Kissick Co., an order for vulcan soot cleaners to be installed on 50 boilers of the B and W type, totaling 39,000 h. p., at the Marion plant of the Public Service Electric Co. of New Jersey. In this plant the boilers are set singly with dusting and blow-doors on each side, through which a hand steam-lance was inserted for hand-blowing.

The International Pulverized Fuel Corporation, New York, has filed an application for a charter in Delaware to carry on the business of mechanical engineers and the manufacture of machinery for producing gaseous materials for products for light and heat. The company is incorporated for \$100,000 and the names of the incorporators are V. Z. Carachristi, H. V. Ball, Bronxville, N. Y.; George L. Bourne, Mamaroneck, N. Y.; Samuel G. Allen, New York; J. E. Mulfeld, Scarsdale, N. Y.; LeGrand Parish, Mountain View, N. Y.; and J. S. Coffin, Englewood, N. J.

The Railroad and Coal Handling Company, Chicago, Ill., has been awarded contracts by the Illinois Central for water station improvements at Effingham, Ill., and Kentwood, La. At Effingham the work includes the installation of 4,800 ft. of 6-in. pipe line and 50 ft. of 4-in. pipe line with valves and hydrants, and the building of the foundation for a water tank. The improvements at Kentwood include a 10,000-gal. fuel oil tank, 100 ft. of 8-in. pipe line, 100 ft. of 12-in. pipe line and the construction of a brick pump house 20 ft. by 28 ft., to contain 2 complete pumping units, each consisting of a Morris centrifugal pump with a capacity of 500 gal. per minute and a 25 hp. Stover fuel oil engine. The Railroad Water and Coal Handling Company will also build the foundation for a water tank at this point.

The Edison Storage Battery Supply Co. has opened a new sales office at New Orleans, La. and C. A. Luckey who has heretofore been attached to the sales office of the Edison Storage Battery Co. in Chicago has been appointed resident manager of the new office. Mr. Luckey is a graduate of Franklin Military Academy, Franklin, New York, and the Bliss Electrical School, Washington, D. C. 1901. He was connected with the Western Electric Co. from 1901 to 1902 and then went with the Safety Car

Heating & Lighting Co. where he remained until 1911. The first four years with this company, Mr. Luckey was in the electrical laboratory and he was then transferred to the Chicago Branch. In 1911 Mr. Luckey went with the Railway Utilities Co., Chicago, and in 1912 joined the sales force of the Edison Storage Battery Co. Orange, N. J., and was attached to the Chicago office. The new office of the Edison Storage Battery Co. in New Orleans is at 201 Baronne street.

On June 15 the stock of the Kansas City Bolt & Nut Company was purchased by Kansas City interests from the J. H. Sternbergh estate of Reading, Pa. Coincident with the transfer of the property the following officers were elected: George T. Cook, president; Solomon Stoddard, vice-president and general manager; H. R. Warren, secretary and treasurer. The board of directors includes Messrs. Cook, Stoddard and Warren, and A. L. Gustin, president of the Gustin-Bacon Manufacturing Company of Kansas City, and E. A. Nixon, vice-president of the Western Tie and Timber Company, St. Louis, Mo. The company has been in existence since 1888, has a plant which cover 15 acres of ground and has an annual output of 3,000 carloads of finished material per year. It employs from 650 to 750 men, and has a distributing payroll running approximately from \$500,000 to \$600,000 per year. The new organization is increasing the finances of the company and many improvements in the equipment of the plant are contemplated.

TRADE PUBLICATIONS

GRAND TRUNK.—The latest safety bulletin which the Grand Trunk has issued contains besides an account of various accidents which have happened from carelessness, a mention of "some accounts that did not happen, and why they did not, being a record of commendable conduct on the part of certain employees."

GENERATOR COOLING AND CLEANING.—This is the title of a booklet which has been recently issued by the Carrier Air Conditioning Company, Buffalo. It describes the Carrier Generator Cooler, and the advantages to be gained by cooling and cleaning the air supply for ventilation of turbo generators. The booklet is illustrated, and special attention is paid to a description of the non-clogging type of spray nozzles.

THE HISTORY OF THE PLANER.—This is the title of an attractive booklet which has recently been issued by the Cincinnati Planer Company, Cincinnati, Ohio. The booklet is a study of contrasts, there being shown on facing pages examples of the early and earliest planers and examples of the modern planers now forming part of the company's line. The latter part of the booklet also compares machines made by the Cincinnati Planer Company in its earlier days with the same class of machines which it now makes, the accompanying reading matter explaining wherein the most important improvements have been made.

COAL AND ASHES GATES.—C. W. Hunt Company, Inc., West New Brighton, N. Y., has recently issued catalogue No. 15-3 relative to the Hunt coal and ashes gates. The catalog is of the standard 6 in. by 9 in. size. It contains illustrations and complete descriptions of the company's standard types of gates or valves for controlling the flow of bulk materials. The dimensions are given of those which are more frequently used in power house and storage pocket design. The illustrations showing the application of these valves are selected with the idea of assisting where there is any question as to the type best suited to the requirements.

TELEPHONE APPARATUS.—The Western Electric Company has recently issued Catalogue No. 3 of telephone apparatus and supplies containing in its 400 pages illustrations, descriptions, specifications and list prices of its complete line of telephones and accessories. The listings include everything that is needed by telephone companies for the inside and outside plant—telephones, switchboards, power plants, cable, line construction tools, line construction materials and miscellaneous telephone apparatus. The listings include all types of equipment that are in common use. The book contains, further, complete descriptions, circuit diagrams and directions for use. The Western Electric Company has also lately issued the section of the catalogue dealing with inter-phones in a separate 60-page catalogue bearing the title: Western Electric Interphones and Accessories.

Railway Construction

EMIGRATION CANYON.—This company plans to construct an extension south to East Mill Creek, Utah, about three miles. H. E. Grant Young, Jr., chief engineer, Salt Lake City, Utah.

LEHIGH & NEW ENGLAND.—Surveys are being carried out by this company for a line to be built from Bath, Pa., via Chapman Quarries to Benders Junction, about 8 miles. This new construction will eliminate about 10 grade crossings.

NASHVILLE-GALLATIN INTERURBAN.—Surveys have been completed, and rights of way are now being secured by this company for an extension of its line from Edenwold, Tenn., to Springfield, about 18.4 miles. (January 14, p. 85.)

PHOENIX LUMBER COMPANY LINE.—The Phoenix Lumber Company is building a four-mile logging road into its timber holdings west of Springdale, Wash. The work is being done by company forces and 12 per cent of it has been completed.

RAILWAY STRUCTURES

BALTIMORE, MD.—The Baltimore & Ohio has been asking bids on the construction of a new open pier at the company's export terminal at Locust Point, Baltimore, to cost approximately \$650,000. The new pier is to be 1,000 ft. long by 150 ft. wide with a water depth of 35 ft. Specifications call for a double track in the center with another track outside of the pier proper on the east side.

CINCINNATI, OHIO.—The Pennsylvania Lines West have awarded a contract to Henkel and Sullivan of this city, for the masonry and street work in connection with track elevation between Delta and Stanley avenues.

CONNELLSVILLE, PA.—The Pennsylvania Railroad plans the erection of a brick and concrete freight station at Peach street, Conneltsville. The structure will be 16 ft. high, 41 ft. wide and 270 ft. long, to cost about \$35,000.

INDIANAPOLIS, IND.—The Indianapolis Union has awarded a \$125,000-contract to the Ketler-Elliott Erection Company of Chicago for part of the steel work in connection with the elevation of tracks through the business district of Indianapolis.

NEW YORK.—The New York Public Service Commission, First district, has approved of the contract for the construction of twelve stations on the Jamaica Avenue extension of the Broadway elevated line in the borough of Brooklyn, to the P. J. Carlin Construction Company, the lowest bidder, at \$280,700. The stations are located at: Cypress Hills, Elderts Lane, Forest Parkway, Woodhaven Avenue, Freedom Avenue, Greenwood Avenue, Spruce Street, Metropolitan Avenue, Queens Boulevard, Sutphin Road, Newark Street and Cliffside Avenue. The work is to be paid for by the New York Municipal Railway Corporation.

POWDER RIVER, WYO.—The Chicago, Burlington & Quincy is building a double concrete arch bridge, 300 ft. long and 96 ft. high over the Powder river. The work involves the placing of 5,200 cu. yd. of concrete and is being done by company forces.

PULLMAN, WASHINGTON.—The Northern Pacific has awarded the contract for a station to cost about \$40,000 to the Sound Construction & Engineering Co., Seattle, Wash.

SANDUSKY, OHIO.—The New York Central and the Lake Erie & Western will construct a subway at Camp street, which will involve the raising of nine tracks, 28,000 cu. yd. of fill, and 3,000 cu. yd. of concrete. Bids will be received about July 1.

SUPERIOR, WIS.—The Great Northern has awarded a contract to Peppard & Fulton, Minneapolis, Minn., for the reinforcement of a viaduct in the company's yard. The viaduct proper will be reinforced with 60 tons of steel, and the present timber approaches will be partially renewed, and partially replaced by embankments. About 400,000 ft. B.M. of lumber, and 14,700 lineal feet of piling are being used. The cost of the entire work has been estimated at \$35,000.

Railway Financial News

BOSTON & MAINE.—Arguments before the Public Service Commission of Massachusetts on the petition of the trustees of Boston & Maine for an extension of time for one year within which to carry out the plans for reorganization have begun and a written statement from Judge Marcus P. Knowlton to the effect that he favored the granting of this petition was offered by Charles P. Hall, one of the trustees. Judge Knowlton is the representative of the minority stockholders who have been objecting to the reorganization plan of the Boston & Maine as now approved by the trustees.

CHESAPEAKE & OHIO.—The Public Utilities Commission of Ohio has granted permission to the Chesapeake & Ohio of Indiana (Chicago line of the Chesapeake & Ohio) to issue \$50,000 additional stock and \$95,000 additional first mortgage 5 per cent 20 year bonds, the stock to be issued at par to pay off indebtedness and the bonds at 80. This indebtedness was incurred for the construction of additions extensions and improvements.

DETROIT, TOLEDO & Ironton.—The Public Utilities Commission of Ohio has authorized the Detroit, Toledo & Ironton to issue \$100,000 first mortgage five per cent bonds to be sold at not less than 88, the proceeds to be used to pay for six locomotives and 16 refrigerator cars.

MARIETTA, COLUMBUS & CLEVELAND.—This road is to be sold at foreclosure on July 18. The upset price is fixed at \$700,000.

SOUTH DAKOTA CENTRAL.—This road was sold under foreclosure on June 12, for \$952,000.

THE WESTERN PACIFIC.—The reorganization committee, Alvin W. Krech, chairman, has notified depositors under the plan of reorganization that the first installment on the purchase price of new bonds is due June 26.

NEW ROAD TO OPEN MONGOLIA.—There are three inlets into Mongolia: One from Changchun going up the Sungari to Taonanfu; the second from Ssupingkai on the South Manchuria Railway to Kailu via Chengchiatun; the third from Jehol to Chihfeng. The proposed construction of the Ssupingkai-Chengchiatun Railway, although only 53 miles long, is an initial step of great commercial importance taken for the opening-up of the neglected Mongolian resources. Seen from an agricultural point of view, the arable land in Eastern Mongolia includes a fertile country in the Taoerh valley, the region in the Upper Liao valley, and the zone about Chihfeng and Wutancheng, the total area amounting roughly to about 8,200,000 acres. All this vast area is already under cultivation. Land available for cultivation or for stock-raising is estimated at about 17,500,000 acres.

STANDARD GAGE IN JAPAN.—Japan may decide to change her main railroad system from a narrow to a wider gage. The present gage of 3 feet, 6 inches, was adopted when the first line was built in Japan, but experience has demonstrated the wisdom of widening it. Especially is the change desired in the interest of a greater development of commerce and industry. It is planned to inaugurate the tremendous task by widening the gage on the main trunk line, which connects Tokio with Shimonoseki, a distance of about 800 miles. This is the line which connects with Korea and the Siberian Railroad to Europe. The reconstruction expense for this line, covering a period of 12 years, is estimated at about \$148,500,000. The reconstruction of the other lines of the empire is estimated to cost the same figure, the work extending over a period of 25 years. These estimates are made on the supposition that an annual amount of \$10,000,000 can be borrowed from the ordinary accounts of the government, besides the railway profits, and if the loan from the ordinary accounts of the railway profits is increased, the time required for the reconstruction will be reduced accordingly. The estimated reconstruction expenses are the maximum figures, which will be lowered to some extent by the use of old materials and other economies.